FEMALE ADOLESCENTS' KNOWLEDGE REGARDING THE IMPLICATIONS OF PREGNANCY IN BENGO AREA – ANGOLA

by

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Student number: 3417-299-8

DECLARATION

I declare that the study on **FEMALE ADOLESCENTS' KNOWLEDGE REGARDING THE IMPLICATIONS OF PREGNANCY IN BENGO AREA – ANGOLA** is my own work and that all the sources consulted, used or quoted are reliable sources and that this work has not been submitted previously in any other institution.

SIGNATURE **DATE ....**

(Maria Da Conceiçăo Martins da Silva)

FEMALE ADOLESCENTS' KNOWLEDGE REGARDING THE IMPLICATIONS OF PREGNANCY IN BENGO AREA – ANGOLA

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ABSTRACT

This is a descriptive study with a quantitative, non-experimental and contextual design, with the objective of describing the knowledge of female adolescents with regards to the implications of pregnancy. The study took place in the Bengo Province, more specifically in the school of the suburb Bairro da Açúcareira and the sample was constituted by 100 female adolescents, within the age group 13 to 19 years. Simple random sampling was used for the selection of the sample. For the collection of data a structured questionnaire with closed questions was used. Based on the data obtained the researcher draws the following conclusion: there is a need to develop educational programmes pertaining to the consequences of pregnancy, not only for adolescents but also for the teachers and parents, as the respondents indicated that teachers and parents would be the ideal people for this type of discussion; on the other hand, and of extreme importance, there is a need for specific assistance to adolescents at health centers and hospitals of the province with regard to the lack of entertainment for adolescents in the province is also an aspect that deserves attention on the part of the government of the Province of Bengo.

KEY TERMS

Adolescence; adolescent; knowledge; pregnancy in adolescence.

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Dedication

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"The way in which we look at adolescence and help those that in any way suffer during that phase of growth, counts towards our own past and present history, as people and as society, but above all it projects into the future the destiny of many lives".
Pedro Strecht
in "Vontade de Ser"

http://www.oprimeirodejaneiro.pt/?op=artigo&sec=a1d0c6e83f027327d8461063f4ac58a6&subsec=73b817090081cef1bca77232f4532c5d&id=7de943792a4a6007faadc3611512ed61
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Chapter 1

Orientation to the study

1.1 INTRODUCTION

This chapter is an introduction to the study. It outlines the study, describes the background to the problem, formulates the problem statement, and discusses the purpose and significance of the study. It further includes the research question and the objectives. The researcher also briefly discusses the research methodology and design, population and sample, setting, data collection and analysis techniques, as well as the reliability and validity of the instrument and includes the ethical considerations for the study.

1.2 BACKGROUND TO THE STUDY

The researcher presents an overview of the demographic aspects and the social and geographical situation in the country in order to orientate the reader to the setting where the study is to take place. The study focuses on adolescents' perceptions regarding the implications of pregnancy. The study was undertaken in the Bengo province, which is approximately 60 km from the city of Luanda, in Angola.

1.2.1 Demographic information of Angola

Angola is situated on the western coast of Africa, more specifically in the south-west part of Africa, and is bordered in the north by the Democratic Republic of Congo, in the east by Zambia, in the south by Namibia and in the west by the Atlantic Ocean. It has an area of 1 276 700 km², and a population estimated at 13,5 million, of which 42% live in an urban environment and 63,6% are younger than 20 years of age. Owing to the situation of prolonged war the country has presently 4,2 million displaced inhabitants (http://www.redesida.org/verpais.asp?idpais=1, 11-03-2005). Administratively, Angola is divided into 18 provinces and there are various ethnic groups, among which are the Ovimbundo in the centre of the country, more specifically in the provinces of Huambo, Benguela and Huíla and who constitute about 38% of the total population; the Mbundu,

in the north-west, who constitute the second largest ethnic group and represent 23% of the population; and other small minorities such as the Lunda, the Cokwe (in the south), in Lunda Sul and Lunda Norte. There are also the Cuanhama, the Nyaneca and the Nkhunibi who are from the provinces of Moxico, Kuando Kubango and Cunene.

Figure 1.1

Map of Angola

(http://pt.wikipedia.org/wiki/Angola, 26-04-2007)

1.2.2 Natural resources

Angola is a country rich in oil reserves, with abundant mineral resources, a vast capacity for the production of electricity and great potential in the areas of agriculture, fisheries, forestation and cattle breeding (http://www.investangola).

Although Angola has an enormous potential for development in terms of natural resources, as a consequence of the long and intense civil war it is at present a country deeply affected by poverty at national level, a fact which encourages adolescents to become involved in prostitution and which has disastrous consequences such as infections through STIs and undesired pregnancy amongst adolescents.

1.2.3 Socio-demographic aspects

Angola became independent in 1975 and during approximately 30 years the country experienced a situation of civil war which had major consequences in social, economic, demographic and cultural areas for the population. During the war there was a breakdown of the basic infrastructure of health services, education and basic sanitation, as well as a migration of the population to the urban areas, searching for safety and better living conditions.

This dramatic scenario contributes, to a certain extent, to the social crises which are found at present and to the impoverishment of the population, making it vulnerable to certain diseases such as malaria, tuberculosis, and sexually transmitted diseases (STDs) including HIV/AIDS.

1.2.3.1 Fertility rate

The fertility rate is very high, on average, 7 children per woman. The male rate is 91%, i.e., for every 100 Angolan women there are on average 91 men. The population structure at national level is similar in all the regions. There are, however, regional variations in terms of the male rate. While the capital has a higher male rate, with an identical proportion of men and women (99%), in other regions the male rate varies between 86% in the west and 9% in the north (Multiple Indicator Cluster Survey (MICS) 2003:27).

The percentage of urban population is 66% and the rural population 40% which is almost the reverse of the situation found around the mid-1990s (http://www.redesida.org/verpais.asp?idpais=1, 11-03-2005). The average age for first marriage is 21,4 years for women and 24,7 years for men.

The Angolan population is very young: approximately 50% of Angolans are younger than 15 years of age, while 60% are younger than 18 years of age. Ninety-three percent of the population is younger than 50 years of age, which means that this population is at a sexually active age (MICS 2003:27).

It is further indicated that with regard to the number of members in a household, there are on average 4,8 members per household, with the urban households having a slightly higher number than the rural households (MICS 2003:27).

1.2.3.2 Mother and child mortality

Angola has one of the highest levels of mother-and-child mortality in the world. Maternal mortality is estimated, at national level, to be 1 850 deaths per 100 000 live-born children, which implies that more than 11 000 women die annually in Angola as a result of pregnancy and childbirth complications. The main direct causes of maternal deaths are obstructed childbirth, pregnancy-related haemorrhage at delivery and puerperium and abortion complications, and hypertensive diseases related to pregnancy, which reflects the precariousness and deficient quality of services provided and the lack of accessibility to these services (Rita, Feio & Fagundes 2004:21).

Obstetric emergencies are aggravated by the high numbers of childbirths at home, the low attendance of prenatal care and inadequate assistance at the time of delivery. The home birthing also constitutes a risk for the babies. Complications which cause the death of the mothers also harm the babies. Estimates indicate a level of mortality of 254 per 1000 live-born children below 5 years of age (Rita et al 2004:22).

The registered mortality rate means that of 600 000 newborn babies per year, 90 000 will not reach their first birthday and a further 60 000 will not reach their fifth (MICS 2003:35). Newborn babies die or are harmed by the mothers' ill health, inadequate care during pregnancy, inadequate treatment and assistance during delivery and the puerperium, including improper hygiene (Rita et al 2004:23).

1.2.4 National Health System

The population growth, motivated by the large influx of the population to the cities, gave rise to the growing overburdening of the existing health service structures.

The Angolan Government Gazette 1, Serie No 34, 28 August (1992:392) refers to the National Health Policy as defined by Law no 9/75, of 13 December 1975 which defines as a priority the improvement of the health situation in the country, having adopted a

socialist system of health care: i.e. the population makes a nominal monetary payment for certain services such as prenatal care, ultra-sound tests, lab tests and others. While, the universal tendency is to progressively increase the state's share in the expenditure.

1.2.5 Framework of the National Health System

The framework as outlined in the Act for the National Health System states in Chapter I, Article I that the state promotes health care within the limitations of the human, technical and financial resources available. Health care is provided by state services and institutions, or by other public or private agents, for commercial purposes or as non-profit organisations, under the supervision of the state.

Health protection constitutes a right of the individual and the community, which is achieved through the joint responsibility of the citizens, of society and of the state, with freedom to seek and to provide care in terms of the law:

Chapter 2, Article II of the abovementioned Act defines the following principles of health care:

- Promotion of health and prevention of disease are part of the state activities, ensuring an equitable distribution of resources and utilisation of services.
- Promotion of equality for all citizens with regard to access to health care applies whatever their economic situation and wherever they live.
- Higher risk groups, such as children, pregnant women, the aged, the handicapped, with priority for workers whose jobs justify it, ought to be the object of special measures.
- Organised participation of individuals and community within the definition and planning of the health policy should be promoted.
- Promotion of health training and research seeks to involve services, professionals, the community and traditional medicine (National Health Policy Chapter 2 Article II 1975:392).

The health policy is developmental, permanently adapting to the conditions of the reality in the country, its needs and its resources. In this regard, the country is undergoing a phase of reconstruction, reorganising the basic social infrastructure destroyed by the

war and developing the qualifications of human resources, while at the same time redefining policies and adjusting them to the real needs of the population, with a view to improving the living conditions of the population.

1.2.6 Sexual and reproductive health

With regard to reproductive health services, since 1986 the Ministry of Health has been developing programmes focused on maternal services and including prenatal, childbirth and post-delivery care, family planning, and prevention, diagnosis and treatment of sexually transmitted diseases.

These services are provided in first-, second- and third-level health care centres, which means that this care is provided at the health posts and health centres, municipal hospitals and central maternity facilities which correspond to the specialised service, though there is still a deficit in terms of meeting the real needs of the population.

1.2.7 Family planning services

At the beginning of the millennium, the prevalence of contraception in sub-Saharan Africa was the lowest in the world, estimated in 2000 as approximately 23%. MICS (2003:118) indicates a very low use in Angola, with only 6% of women between the ages of 15 and 49 years of age using (or whose partner is using) some type of contraceptive method, whether modern or traditional.

Contraception is more prevalent in the urban areas, where the use of contraceptives by women is approximately four times higher than in the rural areas. The use of contraceptive methods varies greatly according to the socio-economic status of the households and the level of education of the women. For the female adolescents in the rural areas the situation is more serious because access to family planning services is very limited (MICS 2003:119).

1.2.8 Assistance to adolescents

According to MICS (2003:27), in Angola, 37% of the population is between the ages of 10 and 24, which represents a group of 5,2 million individuals with specific needs in terms of sexual and reproductive health.

Given their behaviour, lifestyle and lack of adequate information on sexuality and contraception, it is unfortunate that adolescents start having sexual relations very early, without having the capacity to take responsible decisions on the consequences and risks thereof. Thus, these practices increase the rates of STI/HIV/AIDS, as well as the number of undesired pregnancies which often end up in abortions; risk during childbirth; pelvic infections; sterility; or the premature birth of children. Furthermore, pregnant adolescents are in a vulnerable situation, as having discontinued their education they face reduced professional opportunities (Rita et al 2004:22).

Gender-related violence, of which 90% of victims are women, is manifested at all levels of society. This violence includes physical, psychological and sexual aggression. Usually the woman is economically dependent and has no power of decision about her sexual and reproductive life, and the complications of undesired pregnancy listed above result in economic difficulties, reduction of family income and increase in expenditure for the state in terms of health and education (Rita et al 2004:22).

Thus, both because they are more vulnerable and because they offer more possibilities for effective change, adolescents deserve special attention, both in terms of information and education programmes and with regard to their sexual and reproductive health. Programmes for adolescents need to promote the foundations for forming relationships, mutual respect and trust; to help prevent early sexual involvement, to protect them when sexually active; and prepare adolescents for a responsible paternity or maternity.

The focus fell on adolescents at a conference in Cairo in 1994 at which guidelines for the care and support of adolescents were drawn up. In Angola, these guidelines have been implemented only in the provinces of Luanda, Benguela, Huíla and Huambo. With regard to the provision of services, weaknesses in management lead to deficiencies in quality and limitations in accessing the services offered.

Another factor that affects management of support services for adolescents is the lack of standards. For the reasons indicated above, information and education of adolescents constitutes an emerging task which implies the involvement of not only health and education professionals, but parents and society in general as well.

Within the national context, the fact that sexual involvement starts very early in life means that the intervention must start during pre-adolescence, particularly at school level, but also through other channels of social communication (Rita et al 2004:47).

1.2.9 Strategies adopted by the National Directorate for Public Health for the five-year period 2002/2007

With a view to promoting an integrated reproductive health policy, sustainable and accessible to all women, and taking into account the objectives defined at the International Conference on Population and Development (Cairo 1994), and at the International World Conference for Women (Beijing 1995) aimed at promoting Reproductive Health, Angola has defined the following priorities:

- Prevention and reduction of mother-child and neonatal morbidity and mortality
- Wide access to family planning services
- Prevention, diagnosis and treatment of STIs, including HIV/AIDS and colon, breast and prostate cancer

Efforts should be developed to reach high-priority groups, defined as:

- Women with high obstetric risk
- Both male and female adolescents
- People more exposed to STDs/HIV
- Displaced populations

1.2.10 National Strategic Plan for STIs/HIV/AIDS

According to the National Strategic Plan for STIs/HIV/AIDS (2004:16), the distribution of HIV/AIDS cases per age and gender indicates that approximately 60% of the cases occur between the ages of 20 and 39 years, i.e., the age of higher economic productivity, with a higher incidence amongst adolescents and young people between the ages of 15 and 39 years and lower incidence in the 40 to 59 years group. This situation could be due to the fact that girls become involved in sexual relations earlier and earlier, and also to gender imbalance and the increase in commercial sexual practices amongst adolescents as a consequence of the high levels of poverty.

According to a study carried out by the group Associação Luta pelo VIH in Luanda (2003), on the topic “The Child, the Family and HIV/AIDS”, investigation of a sample of 152 children below 18 years of age proved that a very high number live in a situation of vulnerability and poverty, while 89,4% are orphans due to the war, accidents or disease, especially due to HIV/AIDS. The dramatic situation of an extremely rapid increase in HIV/AIDS, increase in early unprotected sexual relations which can lead to early pregnancies (many of which result in infected or orphaned children) is probably the result of misinformation about the consequences of pregnancy in adolescence.

The manual for medical conduct points out that the fact that young girls receive sexual education does not influence their decision on whether to get involved in sexual activities at an early age (Sucupira 2000:416). However, amongst those who receive such education, there are fewer pregnancies. Amongst adolescents who attended classes in sexual guidance, the number of those who used condoms in their first sexual encounter was higher.

Health education is an activity which goes well beyond providing information and knowledge on reproductive health. It is a process which involves rescuing the individual, promoting self-esteem and building an awareness of the risks involved. Only then can one achieve an effective change in attitude with regard to sexual activity (promoting responsible sex).

There are no data available in Angola with regard to adolescents’ perceptions of the implications of pregnancy. Adolescent pregnancies have adverse social, cultural and

health implications both for the mothers and for their children, and generally also for the grandparents. According to the Director of the Bengo Maternity Hospital, during an informal interview with the researcher on 20 June 2006, in the province of Bengo approximately 500 babies are born annually to adolescent mothers.

Many adolescent mothers end up having to discontinue their studies, thus limiting their chances of finding jobs with salaries so as to be able to sustain themselves and their children. Moreover, amongst the physical problems experienced by adolescent mothers are pregnancy-induced hypertension, premature labour, and anaemia (Fraser, Cooper & Nolte 2006:22). These physical problems might remain undetected, or be detected too late in the pregnancy, unless the adolescent has access to prenatal clinics.

In an interview with the Angolan National Institute to Combat AIDS during 2005 and 2006, financial difficulties can aggravate the problems of social adjustment of adolescent mothers, increasing the possibility of them having to resort to prostitution so as to survive. Prostitution has implications in terms of health risks, especially in Angola, where there is an HIV/AIDS prevalence estimated at 2,8% amongst HIV positive pregnant women.

Forced early marriages can lead to social problems, including child abuse. The effects and consequences of pregnancy amongst adolescents and the sacrifices they endure are enormous. “Adolescent mothers face much misfortune, many failures and inabilities in their lives. This is sometimes referred to as “the syndrome of failure”: failure to achieve, fulfil and execute the role of adolescent; failure to remain in school; failure to limit family size; failure to establish a professional vocation and become self-supporting; and failure to reach their potential in life” (Fraser et al 2006:22).

Even in the USA, despite efforts to provide continued education so as to reduce the number of adolescent pregnancies, an estimated 800 000 to 850 000 of the adolescent pregnancies registered annually are reportedly unintended pregnancies (Coupey 1997:1355-1356).

Within this context, and with the aim of assisting the government in urgently redefining serious and committed prevention policies aimed at reducing this distressing situation, it is proposed to carry out a study aimed at evaluating the level of knowledge about the implications of pregnancy amongst adolescents in the 14 to 19 years' age group, in the province of Bengo, municipality of Caxito, and to propose measures based on real needs evidenced by adolescents from this province.

1.2.11 Educational network

More than forty years ago, the nations of the world affirmed in the Universal Declaration of Human Rights that "all people have the right to education". However, notwithstanding the efforts undertaken by the countries all over the world to ensure the right of all to education, the following realities continue to exist (World Conference on Education for All, Jomtien, Thailand, 1990):

- More than 100 million children, of which at least 60 million do not have access to primary schooling
- More than 906 million adults, of which two-thirds are illiterate women
- More than one-third of adults in the world do not have access to printed information, to new resources and technologies, which could improve the quality of life and help them to understand and adapt to social change.
- More than 100 million children and a countless number of adults are not able to finish basic schooling, while others, despite the fact that they complete it, are not able to acquire essential knowledge and skills.

War, civil conflict, violence, child mortality which could be avoided and the general degradation of the environment, as well as other problems, hinder the efforts made towards meeting basic learning needs (World Conference on Education for All, Jomtien, Thailand, 1990).

MICS (2003:121) indicates that until the recent reform of the Angolan educational system, only the first four years of basic schooling (Grades 1 to 4), designated as primary education, were compulsory for Angolan children. With the Education Reform Act approved by Parliament in 2001, the period of compulsory education was extended to 6 years (that is up to Grade 6). Educational reform had the merit of simplifying the

educational system structures: primary education now comprises six compulsory years of schooling for children between the ages of 6 and 11. Secondary education still comprises six years divided into two levels of three optional years each. Until 2003, basic education in Angola included eight years of schooling divided intro three levels: primary education of four years, and the second and third levels (basic intermediary education) comprising two years each. Secondary education consisted of four years. The admission age for the first year of primary education remains the same as previously.

There has been a low rate of school attendance, with 44% of children not attending the first four years and 94% not attending the second level of basic education. Furthermore, due to late admission to school, the majority of children attending basic education do not do it within the recommended age. This situation gives rise to teaching difficulties, as one curriculum must be taught to children of very different ages. Adding to these difficulties, it must be noted that in 2001, the Ministry of Education reported an average of 64 learners per classroom. Due to the high rate of school failures, the education system is currently incapable of integrating new learners. Amongst Angolan adolescents who attend school, the vast majority (85%) attend the first six years of basic schooling, which is supposed to be completed, without failures, up to the age of 12 (MICS 2003:123).

The report of the 47th session of the International Conference on Education (2004:28) indicates that, in Angola, young girls represent 51% of the population and represent the social stratum which registers the lowest level of net basic schooling, i.e., less than 30% in comparison to young boys.

Some of the reasons which can be listed to explain this situation of young girls are related to historical cultural specificities and others to the past political military instability. The main negative factors are poverty, domestic work, early marriage and early pregnancy. The distribution of school abandonment per level of schooling indicates that as the girls advance from one level to the next they more readily leave school in comparison with the boys, which is reflected in the low levels of schooling amongst female adolescents.

The rates of schooling per area of rural residence are more unfavourable with regard to gender. This fact contributes to the widespread poverty amongst rural women. Due to early pregnancy and premature marriages, the female population attending school ends up leaving school. At 18 years of age, a third of Angolan women have already given birth and at 20 years of age, 68% are already mothers (Report of the 47th session of the International Conference on Education 2004:29-30).

At the level of higher education, the number of boys is almost double the number of girls, which indicates a high level of gender inequity in terms of opportunity and access to higher levels of education. In 1997 the University Agostinho Neto had a student body of 7 916, of which 62% were males and 48% were females.

The situation pertaining to adolescents all over the developing world is quite disturbing, but it is worse in Angola, where the war brought about serious problems, from poverty and lack of capacity of the training institutions to meet the problems, to a situation where adolescents start, at a very young age, working informally to ensure the livelihood of their families, and therefore do not attend school.

1.2.12 The province of Bengo

The province of Bengo, which is the target area for our study, was established in 1975 due to the separation of the previous district of Luanda. It is situated in the north of the country, and has as boundaries in the north and west the ward of Barra do Dande, and also in the west the province of Luanda; in the north-east the ward of Kikabo and in the south and south-east the ward of Úcua. The capital of the province is the city of Caxito in the municipality of Dande. It has approximately 200 000 inhabitants and an area of 31 371 km². It consists of five municipalities: Ambriz, Dande, Ícolo and Bengo, Nambuangongo and Quiçama. It has a dry tropical climate and the fishing sector is situated in the coastal area in the Dande municipality. This region has an average temperature of 25ºC, a temperature range of 6ºC and a relative humidity of 81%, a rainfall of 950mm, with the rainy season going from September to May. (http://www.guiageográfico.com, 14-07-2005).

1.2.13 Geographical location of the Bengo province

Figure 1.2

Map of the province of Bengo

(http://www.guiageográfico.com)

1.2.14 Socio-demographic information of Bengo province

The city of Caxito in the Bengo province comprises 45 suburbs. The total population of this city is estimated to be 54 592 inhabitants of which 54% are women and 46% are men, with a total male rate of 85% (85 men for every 100 women). The population is predominantly young and female (http://www.guigeográfico.com).

The majority of the population of this province belongs to the ethnic group Ambundu and is part of the language group Kimbundu (http://www.guigeográfico.com). The population is mostly involved in farming activities such as the cultivation of bread-banana, cassava, sweet potatoes, corn, peanuts, oranges, lemons, and sugar cane, which constitute the main agricultural activities of the province.

The main river in the province is the Dande River, which flows from Banza Quitexe with a short course of 240 km, of which 60 km are navigable (including the tributary). The river mouth is at Barra do Dande, with a river basin of 12 940 km² and the main tributary on the left bank is the Úcua River.

River fishing is the main activity in the Bengo and Ndanji rivers, where the main fish species is kakusso. This lagoon species is used for one of the well-known dishes in Angola, served with palm oil beans.

Marine fishing in this area is concentrated mainly in the Ambriz region, where shellfish such as prawns and crayfish are fishing resources which contribute to the promotion of export income (www.guigeográfico.com,).

1.2.15 Health network of the Bengo province

Table 1.1 Health network of the Bengo province

Hospitals	Health centres	Health posts	Pharmacies	Total
5	6	86	2	99

Source: Provincial Health Directorate of Bengo

The data presented in table 1.1 indicate that including hospitals, health centres and health posts, there are a total of 99 institutions for the provision of health services. However, few of these offer specific support and care to female adolescents.

Table 1.2 Prenatal consultations for the age group 15 to 25 years of age at the Bengo Maternity Hospital in 2005

Age group	Months of the year	Consultations which took place
15 to 25 years of age	January	92
	February	54
	March	56
	April	42
	May	45
	June	41
	July	52
	August	68
	September	73
	October	81
	November	70
	December	79
TOTAL		**753**

Source: Report on Statistical Data of the Maternity Hospital in Bengo Province 2005

The data presented in table 1.2 indicate a high number of adolescent pregnancies, although there are some gaps in the statistical registers for the whole country. The grouping in age groups does not allow a more precise analysis of the actual number of adolescents assisted at prenatal consultations.

The nursing professionals at the Bengo Maternity Hospital indicated verbally to the researcher that many adolescents do not attend the prenatal clinic during pregnancy and for this reason the data indicated above are probably an under-estimation.

Table 1.3 Births which took place at the Bengo Maternity Hospital in 2005

Age group	Births
< 15 years	69
16 – 20 years	177
21 – 25 years	178
26 – 30 years	112
31 – 35 years	46
> 35 years	77
Total	**659**

Source: Report on Statistical Data for the Province of Bengo 2005

When adding the age group under 15 years to the 16 to 20 years of age group, a total of 246 adolescent mothers delivered babies during 2005. According to the verbal information provided to the researcher by the director of the Maternity Hospital in question during an informal visit, these numbers reflect only intra-institutional deliveries. It is general knowledge that many deliveries are performed in the community by traditional midwives or by family members.

1.2.16 Educational information in Bengo province

With the advent of peace during 2002, there was an expansion of schools in all the municipalities of the province. On the one hand this facilitates the carrying out of this study and on the other constitutes the opportune moment to introduce a programme on sexual and reproductive education at the schools.

Table 1.4 Distribution of schools that exist in the province of Bengo 2005

Order no	Municipalities	Level I	Levels I and II	Levels I, II and III	Levels II and III	Special schools	Intermediary institutes	Total
O1	Ambriz	12	-	-	1	-	-	13
02	Bula Atumba	17	-	-	1	-	-	18
03	Dande	43	12	4	1	1	3	64
04	Dembos	34	-	-	1	-	-	35
05	Icolo e Bengo	72	-	-	3	-	-	75
06	Kissama	18	-	-	1	-	-	19
07	Nambuangongo	75	-	-	1	-	-	76
08	Pango Aluquém	14	-	-	1	-	-	15
Grand Total		**285**	**12**	**4**	**10**	**1**	**3**	**315**

Source: Provincial Directorate for Education, Science and Technology for the Bengo Province, 2006.

Table 1.5 Students registered at Level 1 of Regular Basic Schooling – Bengo 2005

Age	Gender		Total		Grade 1		Grade 2		Grade 3		Grade 4	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
5 years	2 847	1 194	-	-	-	-	-	-	-	-	-	-
6 years	359	319	4 982	2 057	4 982	2 057	-	-	-	-	-	-
7 years			5 252	2 621	3 769	1 909	1 026	581	458	131	-	-
8 years			9 768	1 858	1 414	642	2 291	920	1 063	296	-	-
9 years			9 282	1 908	853	197	1 984	955	931	330	514	129
10 years			4 015	1 582	409	295	1 699	608	1 346	538	561	141
11 years			3 343	1 710	111	189	1 267	667	1 333	606	630	248
12 years			2 492	1 015	-	-	539	270	889	302	1 064	434
13 years			1 237	622	-	-	40	18	659	349	538	255
14 years			626	252	-	-	11	6	25	14	590	232
15 years			812	278	-	-	-	-	15	6	797	272
TOTAL	**3 206**	**1 513**	**31 808**	**13 897**	**11 538**	**5 589**	**8 857**	**4 025**	**6 719**	**2 572**	**4 694**	**1 711**

Source: Provincial Directorate for Education, Science and Technology for the Bengo Province, 2006.

Legend:

MF = Male and Female

F = Female

M = Male

In conclusion, in Angola adolescents start being sexually active at an early age. Factors which play a role in this phase could be

- curious experimentation with drugs
- promiscuity
- poverty
- not having a goal in life
- group cohesion

The war situation that prevailed in Angola for 30 years gave rise to various situations which affected more intensely the children and adolescents. The climate of military instability which forced populations to seek refuge in areas which offered better security and subsequently the dismantling of family structures are at the root of many problems experienced by adolescents.

At present one is faced with a desolating picture in which children and youngsters are forced to find some means of subsistence for their families, and the majority of these children and youngsters are females. The situation of need can determine the adoption of risk behaviours such as prostitution, which is undeniably on the increase, as a means of subsistence, considerably increasing their vulnerability. Also, gender differences, characterised by the lack of power of the woman in decision taking and in the management of her own sexual and reproductive life, have given rise to women in general, and adolescent girls in particular, becoming highly vulnerable to undesired pregnancies and ST infections including HIV/AIDS.

As a cultural and socio-economic phenomenon, adolescent pregnancy, when undesired, and especially when unprotected, involves serious difficulties and risks, amongst which are having to interrupt one's studies; the loss of identity with the age group; perpetuating the cycle of poverty and health problems; and in particular having abortions done in unsafe conditions, with a high risk to life (http://www. abcdocorposalutar.com.br/artigo. php?codArt258,).

There is evidence that within the more economically disadvantaged groups, where there is a higher level of school abandonment and promiscuity, more misinformation, less access to contraceptives, and a higher level of pregnancy amongst adolescents, is where there is a higher incidence of pregnancy in adolescence (http://www. geocities.com/heartland/plains/8436/grovidez.html.?20054, 04-11-2005). There is also evidence that the consequences of irresponsible sexual behaviour are often related to

abortion, abandonment of babies and forced marriages (http://www.geocities.com/heartland/plains/8436/grovidez.html.?20054, 04-11-2005).

In Angola few studies have been carried out with regard to adolescent pregnancies and these were done in the capital of the country, where the means and the opportunities available to adolescents cannot be compared with those in the remaining provinces of the country. Of these studies none concentrated on the knowledge of adolescents with regard to the implications of pregnancy.

The promotion of appropriate behaviours towards sexual and reproductive health, through the introduction of educational programmes, is an activity of crucial importance, and one which must involve multi-professional teams, as it is a problem of public health conditioned by various factors.

From table 1.5 it is evident that adolescents between the ages of 11 and 15 are still attending the first level of basic schooling, when the stipulations of the act for the regular education system determine that children should finish the first level of schooling by age 11. This situation is due to the prolonged war experienced in the country during the last years as well as due to the high rates of school failure.

Table 1.6 Students registered at Level II of Regular Basic Schooling – Bengo 2005

Age	For the 1st time			
	Grade 5		Grade 6	
	M	F	M	F
8 years	-	-	-	-
9 years	-	-	-	-
10 years	88	60	69	28
11 years	584	251	75	23
12 years	344	101	110	26
13 years	366	162	331	129
14 years	601	150	111	41
15 years	181	18	169	49
16 years	398	59	149	12
17 years +	262	32	45	15
TOTAL	**2 824**	**833**	**1 059**	**323**

Source: Provincial Directorate for Education, Science and Technology for the Bengo Province, 2006.

The data indicated above reveal that the highest number of students registered at level II of basic schooling are males and the difference is more noticeable in the age group 13 to 17 years of age, from which one can deduce that girls within this age group have left school, for various reasons, of which pregnancy is one.

Table 1.7 Students registered at Level III of Regular Basic Schooling – Bengo 2005

Age	For the 1st time			
	Grade 7		Grade 8	
	M	F	M	F
9 years	-	-	-	-
10 years	-	-	-	-
11 years	-	-	-	-
12 years	28	10	-	-
13 years	88	12	28	10
14 years	185	66	47	25
15 years	209	27	219	44
16 years	108	12	68	37
17 years	90	24	62	46
18 years +	77	28	-	-
Total	**785**	**179**	**424**	**162**

Source: Provincial Directorate for Education, Science and Technology for the Bengo Province, 2006

In table 1.7 above indicates that girls attending grade 7 and grade 8 for the first time are fewer, which constitutes a great concern for the reasons indicated throughout this chapter.

Against this background, the researcher considered it necessary to investigate the knowledge of female adolescents regarding the implications of pregnancy in the Bengo area, Angola.

1.3 PROBLEM STATEMENT

Due to the 30 year civil war and total destruction of the family structures and only recent implementation of health support programmes for adolescents, the number of adolescent pregnancies remain a problem in the Bengo province.

1.4 AIM AND PURPOSE OF THE STUDY

The aim of the study was to propose strategies to promote the reduction of adolescent pregnancies. The purpose of the study was to explore the knowledge female adolescents possessed on the implications of pregnancy.

1.5 OBJECTIVES

Burns and Grove (2005:15) define research objectives as clear, concise, declarative statements that are expressed in the present tense. The objectives of the study were to

- analyse the knowledge of female adolescents with regard to the implications of pregnancy
- recommend guidelines to schools and health professionals about educational health programmes for adolescents

1.6 RESEARCH QUESTIONS

Burns and Grove (2005:158) describe a research question as a concise, interrogative statement worded in the present tense and usually with one of more variables.

This study answered the following question:

- What knowledge do female adolescents in the Bengo province of Angola have about the implications of early pregnancies?

1.7 SIGNIFICANCE OF THE STUDY

The study is considered as significant for the following reasons:

The literature consulted did not show any previous study about what knowledge female adolescents in Angola have on the implications of early pregnancy.

Research into the knowledge of adolescents with regard to the implications of pregnancy could help to make educators, nurses and health authorities, in particular,

aware of the importance of adolescents' knowledge of safe sexuality. The better adolescents are prepared in terms of life skills, the better they and their children will be prepared for life and the better their life expectancy, which will, for example, provide them with better academic preparation and better socio-economic stability.

This study could be used to plan health education programmes for adolescents and could also be included in the teacher training curricula for general teaching as well as for nurses. One hopes to create an awareness in health professionals, in which the adolescent can be perceived as an individual, responsible for his and her body and his and her actions. This study will also provide information about the existing approaches to sexual behaviour, discussing advantages and disadvantages seeking to enable/empower the female adolescent, preferably together with her partner, to choose the approach most adequate to her life context.

The introduction of programmes on sexual education will contribute to a safe and responsible understanding of sexuality on the part of adolescents in the province of Bengo, and the same programme could be submitted to the ministries of Education and of Health to be implemented in all the provinces of the country.

The study will provide information to health care workers regarding the knowledge that female adolescents have on pregnancy. The study will further help health care workers in the preparation of adolescent and community education on matters relating to the implications of early pregnancies. Health care practitioners can use the information gained to render client-centred care and counselling with particular attention to the implications of early pregnancy.

1.8 RESEARCH DESIGN AND METHOD

1.8.1 Research design

A non-experimental, exploratory, descriptive, quantitative research design was used for the study. The purpose of such a design is to provide an explicit description of the phenomenon explored so that it can be addressed (Burns & Grove 2005:265).

According to LoBiondo-Wood and Haber (2001:12), “quantitative approaches are based on beliefs that human beings are a complex of many physical systems which can be measured objectively, one at the time, or combined”.

1.8.2 Population and sample

The study was conducted at a Level II School in the Açúcareira Suburb in the Bengo province, Angola. In this study, the population was the female adolescents attending a school in the Açúcareira Suburb in the Bengo province.

The sample was drawn from the target population. A non-probability sample design, using a convenient sampling method, was used to select the sample. The researcher went to the school and interviewed respondents who were present and were willing to participate in the study on the days of the visit (Burns & Grove 2005:374). To prevent bias, the researcher selected subjects who met the inclusion criteria (refer to chapter 3).

1.8.3 Data collection

Data were collected using a structured pre-tested interview schedule. The researcher administered the interview schedule. Data were analysed using the Statistical Package for Social Sciences (SPSS) Version 13.0 computer program with the assistance of a statistician from the University of South Africa (Unisa). Descriptive and inferential statistics were used and summaries included descriptive statistics, frequencies and percentages.

1.8.4 Data analysis

The study will provide information to health care workers regarding the knowledge that female adolescents have on pregnancy. The study will further help health care workers in the preparation of adolescents and community education on matters relating to the implications of early pregnancies. Health care practitioners can use the information gained to render client-centred care and counselling with particular attention to the implications of early pregnancy.

The data were analysed using an SPSS Version 13.0 computer program by a statistician at Unisa Computer Department. Descriptive and inferential statistics, such as frequency tables, percentages and correlation tests, were used in the data analysis and summaries. Simple tests of association were also used to identify relationships between variables, including frequencies.

1.9 ETHICAL CONSIDERATIONS

Pera and Van Tonder (2005:4) define ethics as "a code of behaviour considered correct". The following principles were considered in this study:

- permission to conduct the study
- respect for persons as autonomous individuals
- confidentiality and anonymity
- avoiding harm
- justice
- beneficence
- informed consent (see chapter 3)

1.10 SCOPE AND LIMITATIONS OF THE STUDY

The study took place in the province of Bengo in the city of Caxito, at the second-level school of Bairro da Açúcareira.

Burns and Grove (2005:39) describe limitations as restrictions in a study which can reduce the generalisation of the results. There are two types of limitations: conceptual and methodological. Conceptual limitations limit the abstract generalisation of the results. The methodological limitations limit the population to which the results can be generalised. (Burns & Grove 2005:40).

With regard to this study, the information was provided by Angolan adolescents of the Bengo province, city of Caxito, thus limiting the transferability of the results to other areas.

1.11 RELIABILITY AND VALIDITY OF THE RESEARCH

According to Burns and Grove (2005:214), validity refers to the degree to which the instrument measures what it is supposed to measure. The researcher focused on content validity, which is the degree to which the items in an instrument adequately represent the universe of the content. The structured interview schedule was given to clinical staff experienced in obstetrics and staff with research experience to determine whether the items in the structured interview schedule measured the knowledge levels that contribute to the high pregnancy rate among adolescents in the Bengo province, Angola.

A pre-test, which is a smaller version of the study, was carried out to obtain information to improve the structured interview schedule and to assess the feasibility of the study. The respondents in the pre-test were similar to those in the study and were interviewed under similar settings, but they were not included in the final study. Conducting a pre-test assisted the investigator to identify problems in the structured interview schedule. It also gave an estimate of the time needed to interview each individual, which is important in obtaining consent to participate (Brink 2006:94).

1.12 DEFINITION OF KEY CONCEPTS

For the purpose of this study the following terms were used as defined below:

Pregnant adolescent

A pregnant adolescent is any female aged 19 or younger at the time of becoming pregnant.

Adolescence

Adolescence is a modern cultural and social phenomenon and its end points are not easily tied to physical milestones, but it falls between the phases of childhood and adulthood. The time is associated with dramatic changes in the body, along with developments in a person’s psychology and academic career. At the onset of adolescence, children usually complete elementary school and enter secondary

education, such as middle school or high school (http://encyclopeia.thefreedictionary.com/Adolescent).

Teenager

This is a young person in his or her teens. This phase of psychosexual development starts at about 11 to 13 years and continues up to 19 years.

Pregnancy

Pregnancy is the state of carrying a developing embryo or foetus within the female body (http://www.google.co.za/search?hl=en&q=definition+of+pregnancy&btnG=Google+).

Adolescent pregnancy

Consideration of pregnancy in adolescence must include both the immaturity of the adolescent's body (from a biological point of view) for a pregnancy, and the emotional immaturity of the adolescent as a person, considering the involvement of many aspects of life, such as study, work, and self-support.

An unwanted pregnancy

An unwanted pregnancy refers to a pregnancy that may not have been planned, and that may be unintentional and unwelcome for the pregnant adolescent. Such a pregnancy may occur as a result of non-utilisation of contraceptives or of contraceptive failure (Maja 2002:20-21).

Implication

In this study the term "implication" is defined as something that is implied or involved as a natural consequence of something else. For example adolescents need to consider the implications of an adolescent pregnancy (http://search.live.com/results.aspx?q=Definition+Implications&FORM=qsre4).

Knowledge

Houaiss and Salles (2001:802) define knowledge as the act or effect of intellectual learning, of understanding a fact or a truth, cognition, perception of understanding, discernment, theoretical or practical mastery of a subject, art or science.

Sex education

This refers to education or guidance which makes teenagers aware of their bodies, particularly in respect of reproductive anatomy and physiology. It is a part of comprehensive life skills training which prepares young individuals for the emotional and physical changes they will be going through during and after puberty.

1.13 OUTLINE OF THE STUDY

Chapter 1: presents the introduction and background of the study. It includes the problem statement, purpose of the study, significance of the study, and the research question. It introduces the methodology of the study, scope and limitations, ethical considerations, definitions of terms used in the study and an outline of the study.

Chapter 2: reviews the related literature pertaining to the knowledge of adolescents on the implications of early pregnancies.

Chapter 3: outlines the research methodology used in this study.

Chapter 4: presents a discussion of the data analyses and findings obtained from the questionnaires completed by the participants.

Chapter 5: provides a summary and conclusion, recommendations and implications of the findings for future research.

1.14 CONCLUSION

The chapter introduced the problem under investigation, purpose and objectives of the study, the research design and methodology and ethical considerations, and defined key terms. Chapter 2 describes the literature review.

1.15 ABBREVIATIONS

AIDS	Acquired Immuno-Deficiency Syndrome
HIV	Human Immuno-deficiency Virus
MICS	Multiple Inquiry Cluster Survey
SPSS	Statistical Package for Social Sciences
STDs	Sexually Transmitted Diseases
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Chapter 2

Literature review

2.1 INTRODUCTION

This chapter discusses the literature review conducted by the researcher on the knowledge of adolescents regarding the implications of pregnancy. In order to efficiently meet the demands of a scientific study, the researcher consulted national and international literature. This chapter thus deals with the search for, and review of, literature relevant to the research topic. In this chapter, the concepts and definitions of the key words of the research will also be described, as well as the characteristics of adolescents and aspects related to sexual anatomy and physiology. Female and male sexual development and aspects related to safe sexuality will also be described.

2.2 REASONS FOR THE LITERATURE REVIEW

On the one hand the review of the literature provides a deepening of the researcher's knowledge on the topic of research, and on the other hand it informs the researcher with regard to studies already existing on this topic or similar topics. It was therefore necessary to consult previous studies which could assist the researcher in refining parts of the study, especially with regard to the problem statement, design and data analysis process. It also assisted in forming a basis for comparison when interpreting findings of the current study.

LoBiondo-Wood and Haber (2001:54) state that the objectives of the literature review are as follows: to

- determine what is known and unknown about an issue, a concept or a problem
- determine the gaps, consistencies or inconsistencies within the literature about a specific issue, concept or problem
- determine traditional concepts utilised to examine problems
- reveal new trends of research as well as methodologies and instruments obtained by other researchers

The review of literature about the topic in question also assisted the researcher to bring the problem into focus and to formulate an appropriate research question. The latter is stated in Chapter 1 of this study. Thus, this literature review integrates and facilitates the accumulation of knowledge.

During the present literature review, the researcher was also alerted to unresolved efforts regarding the research topic, i.e., knowledge of adolescents with regard to the implications of pregnancy, as suggested by Polit and Beck (2004:21). The discussion that follows focuses mainly on the research topic.

2.3 CONCEPTS RELATED TO THE KNOWLEDGE OF ADOLESCENTS REGARDING PREGNANCY IDENTIFIED IN THE LITERATURE

2.3.1 Introduction of literature review

African women of reproductive age have 175 more chances of dying during childbirth than women in developed countries. Moreover, 95% of the 529 000 maternal deaths registered in the year 2000 occurred in Africa and Asia. In the same year the maternal mortality rate in sub-Saharan Africa was 920 for every 100 000. In the developed countries it was only 20, and in Latin America and the Caribbean it was 190 (http://www.216.109.124.987search/ cache?ei=UTF-8&fr).

The Executive Director of UNICEF, Carol Bellamy, states in the report prepared by the World Health Organization (WHO) in February 2004 that many deaths in childbirth occur because of the delay in recognising that there is a problem, due to the difficulties faced by the mother in reaching a hospital or receiving quality care. The WHO director, Lee Jong-Wook, adds in the same report that "many women have their children alone or with family members and without the assistance of qualified professionals capable of dealing with childbirth complications (http://www.216.109.124.987search/cache?ei=UTF-8&fr, 14.09.2006).

The high mortality rates registered in sub-Saharan Africa, besides constituting a tragedy for the woman, are also a tragedy for the family and for the community, as the woman who dies during childbirth usually leaves at least two orphaned children. For this reason, it becomes necessary and urgent to take measures aimed, not only at reducing

maternal morbidity-mortality, but also aimed at making adolescents aware with regard to safe sexuality.

Sarmento (1990) (in http://www.virtualpsy.org/infantil/gravidez.html,) stresses that the experience of maternity during adolescence becomes more complicated, as the demands involved in the adolescent's search for identity are added to the great demands of "becoming a mother". This scenario can be more serious when it occurs in a less favourable environment, where the adolescent is faced with other conditions. For example, if the adolescent falls within a low social stratum she faces more difficulties due to her precarious socio-economic conditions and often the lack of support from her family and her partner.

In the rural areas, young girls do not really have a true childhood and much less a true adolescence. A girl must start working at a very young age to assist in her own and her family's survival (Halbe et al in http://www.drcarlos.med.br/ saúde_adol.html,).

It is common knowledge that the number of adolescents who fall pregnant is increasing progressively and occuring at earlier ages, as the appearance of the first menstrual period moved forward by approximately four months per decade of the 20th century, and the average age for the first menstruation is now between the ages of 12,5 and 13,5, which exposes the adolescent to becoming pregnant at an earlier age (http://www.virtualpsy.org/infantil/gravidez.html,).

Sexuality is first taught by the parents, who have the primary responsibility for providing sex education for their children (Fraser et al 2006:354). As a child starts primary and secondary schooling, the responsibility expands to engage teachers. The community also has an obligation to provide sex education programmes so as to convey knowledge about safe reproductive health to adolescents to allow them to make informed decisions regarding their sexual behaviour and their future.

Reproductive health services are among the most essential components of a comprehensive health approach targeted at reducing maternal and child mortality. The concept of reproductive health is centred on human needs and development. Reproductive health was defined by the World Health Organization (WHO 1998:14) as a state of total physical, mental and social well-being, and not merely the absence of

disease or infirmity in all matters relating to the reproductive system and to its functions and processes (Rita et al 2004:15).

The field of reproductive health is full of puzzling questions. Complicated relationships and slowly evolving events or phenomena produce gaps in understanding the full scope of issues impacting on reproductive health. This research study was initiated by the perception that such an apparent gap in knowledge existed, which could explain the observed high numbers of adolescents who fall pregnant and are not able to cope with the results of having children during adolescence.

The effects of adolescent pregnancies are:

- physical: biological
- psychological: cognitive; emotional or affective
- social, economic

The review of the literature revealed the following significant concepts related to the research topic, i.e., knowledge of adolescents regarding the implications of pregnancy, and which could individually or in combination be reflected in the process of knowledge of adolescents regarding the implications of pregnancy.

A discussion of each of the concepts involved in the topic of this study follows. As far as possible, these discussions refer pertinently to the definition, characteristics and outcomes involved in the phenomenon under study.

The concepts related to the topic in question and which were identified during the literature review are as follows:

- knowledge
- adolescence
- adolescent
- reproductive health
- pregnancy in adolescence

2.3.2 Knowledge

2.3.2.1 Definition of the term "knowledge"

Knowledge is the act of acquiring information or notions through study or through experience.

Houaiss and Salles (2001:802) defines knowledge as the act or result of intellectual learning, of understanding a fact or a truth, cognition, perception of understanding, theoretical or practical mastery of a subject, an art, and a science.

The psychologists Piaget and Bruner understood knowledge as being constituted by various processes, development, as something continuous. Piaget believed that an adult individual developed abstract thinking so as to have a capacity to consider alternative dimensions and solutions, as well as a capacity to develop empathy.

In psychology, knowledge is described as being something which is not fragmented, but rather a set of ideas structured and organised in order to obtain something concrete (Fillioud et al 1984).

The phases of cognitive development as described by Piaget are highlighted here in order to establish a correlation with the aspects related to the processing of knowledge during adolescence.

Piaget (in Fillioud et al 1984:369) considered psychic development as "moving towards balance" and distinguished three major stages in the evolution of intelligence. (The female gender is used below in view of the context of this study.)

The first major period of intellectual development is that of "sensory motor" intelligence which extends from birth to approximately 7 years of age. This intelligence is essentially practical intelligence, aimed only at succeeding in the action and not at knowledge as such.

The second stage of development is that of concrete thinking. Around 7 years of age, the child abandons the type of intuitive thinking. The child is then able to reflect on the

objects in front of her, which she manipulates at her will, and is now able to think through the action performed, to experience through the movements. The child can now combine types of reasoning.

Around 11 to 12 years of age, puberty brings about a new, important transformation of reasoning, the change from concrete thinking to abstract thinking. This change, which doubles the powers of intelligence, will initially disturb the personality of the adolescent, but will then enable the adolescent to bloom, providing her with the means to adapt to a world, the complexity of which she understands better.

During adolescence, the adolescent enters into the realm of the possible, and her thinking is no longer bound by what is real. She is able to start from what is possible in order to achieve what is real. And it is due to the fact that she has at her disposal all that is possible and not only the realities which surround her, that the adolescent will develop her important theories that will transform the world. She does not see the practical obstacles that would prevent her from fulfilling her ideas. The adolescent is, in actual fact, not aiming at fulfilling these ideas, as she is so absorbed in discovering a mental world without any limitations.

The adolescent then seeks to establish her own criteria; her thinking becomes independent. Logical reasoning is a type of experience she applies to herself so as to be able to detect contradiction, a need related to the obligation of remaining faithful to herself.

Accordingly, it can also be suggested that the way in which one comprehends, conceives, voices and makes meaning of the world transpires through discourse, language and interactions that are discursive. Thus, meanings, perceptions, understandings and knowledge of the world are not pre-given, but rather actively constructed (Heaven 2001:27).

2.3.3 Adolescence

2.3.3.1 Definition

It is not really known when the term "adolescence" was introduced. According to Henriques (1993) (in http://portalteses.cict.fiocruz.br/transf.php?script=thes_chap&=00007301&lng=pt,) it is a relatively modern concept, which refers to the phase of transition between infancy and adulthood, characterised by physical, mental, emotional and social development of the individual.

Adolescence is a critical period for the development of values and patterns of behaviour, and is distinguished by a higher lever of rebelliousness, a search for identity and a differentiated vision of life. The adolescent becomes aware of the difficulties which she will have to face to develop in the future, but is subject to the support provided by the parents, especially with regard to the economic aspect.

From an etymological point of view, the term adolescence comes from the verb "adolescere" which means to sprout, to grow. Generally, it is believed that the phenomenon of adolescence is a process of change which marks the change from infancy to the adult phase (Heaven 2001:6).

There is no specific consensus with regard to the exact period of duration of adolescence. Yet various authors prefer to agree with the idea that the adolescent phase starts after childhood, around 10 (ten) years of age, and ends around 19 (nineteen) years of age (Henriques 1993 in http://portalteses.cict.fiocruz.br/transf.php?script=thes_chap&=00007301&lng=pt,).

2.3.3.2 Characteristics of adolescence

Adolescence is characterised by moving away from the bosom of one's family and subsequent immersion in the adult world. During this phase the person is influenced by the environment in a much more comprehensive manner than before, when the individual's universe was her own family.

As the social links are established, a set of characteristics deemed necessary to be accepted by the group appear, even characteristics needed to express a style which pleases the self and the others. This set of characteristics which is fundamental for the fulfilment of the social role is known as **persona**, which means a mask/disguise. In the same way that self-esteem represents what the person is for herself, the **persona** represents what the person will be for the other.

2.3.3.3 Concepts involved in the definition of the period of adolescence

According to Halbe et al (in http://www.drcarlos.med.br/saúde_adol.html, research done on 18.09.2006), the American College of Obstetrics considers initial adolescence to be around 10 years of age, and late adolescence between 16 and 19 years of age. Changes which occur during that phase are mainly related to the awareness and expression of sexuality and individuality. There are major changes in terms of education, and need for counselling and guidance with regard to reproductive health and to other medical items and the borderline on maturity. Notwithstanding the alleged high health risks of this phase, adolescents consult doctors less than any other age group.

According to the World Health Organization (WHO), adolescence occurs between the ages of 10 and 19, and there are noticeable differences, from a health point of view, between the early stage, which goes from 10 to 14 years of age, and the late stage, which encompasses the 15 to 19 years period (Lopez et al 1992 in http://portalteses.cict.fiocruz.br/transf.php?script=thes_chap&=00007301&lng=pt, 18.09.2006). Although pregnancies occur in the 10 to 14 age group, most of the information available on this subject refers to the late stage. This fact is of interest because the existence of risk during pregnancy is higher in this latter group, when emotional disturbances and denial of pregnancy occur. The ages of adolescence vary by culture.

Pestrana (1998:114) refers to the World Health Organization who states that adolescence corresponds to a period in which the

- individual goes from the stage of initial sexual characteristics to sexual maturity

- psychological processes of the individual and the forms of identification develop from the phase of childhood to the adult phase
- state of total economic dependency changes into a state of relative independence.

The WHO (2001:1) indicates that "no specific limitations are imposed on adolescence and that this term corresponds to a social grouping which varies both in terms of its composition as well as in terms of its implications" (http://portaalteses.cict.fiovruz.br/transf.php?script=theschoipoid=0007301).

With regard to the question of what is adolescence, it also acknowledges that this is not a simple question, with a one-dimensional answer. This source indicates five components which, as a group, enable us to provide a more comprehensive definition of adolescence: the chronological age, the biological development, the cognitive and psychological development (which includes defining an identity and an interpersonal development), the change of legal status and the possibility of partaking in adult life. Those components, when considered in isolation, do not define what adolescence is. Chronological age is a socially important component in the definition of the timeframe, but there is no specific biological referral element to determine the end of that phase. On a psychological level, many skills appear during adolescence but it is not easy to establish clearly what indicates the beginning of the adult phase (http://www.bireme.br/bus/adolesc/cadernos/capitúlo/cap23.htm,)

Adolescence is also a legal concept, but what determines its beginning and end is not set by law. The sociological concept of adolescence is based on the notion that there are social parameters which regulate when specific social events can be experienced by an adult; however, as the source above points out, the end of adolescence is not simply determined by finishing one's studies, starting to work on a full-time basis or simply by getting married.

In general terms, although those five concepts help to delimit the concept in a more comprehensive manner, they are not fixed concepts and one needs to take into account the dynamics of the social and historical context in which these concepts are defined.

2.3.3.4 Stages of adolescence

Adolescence is a stage in the life of every individual. It is during this stage that the individual discovers her identity and defines her personality. In this process, a crisis comes to the fore, in which the values acquired during childhood are reformulated and a new, more mature structure is assimilated.

Adolescence is the period in which the child is transformed in an adult. It is not simply a change in height and weight, in mental capabilities and physical strength, but also a marked change in the way of being, in the evolution of her personality.

The changes indicated below usually fall into the various stages of adolescence:

- Puberty or initial adolescence (11 to 14 years of age)
    - Development of intimacy (the awakening of the own "ego")
    - Crisis in terms of physical, psychological growth and sexual maturation
    - Still not an awareness of what is happening
    - Acknowledgement for the first time of her limitations and weaknesses, and feeling of defencelessness when faced with them
    - Emotional imbalance, which is reflected in exaggerated sensitivity and irritability
    - Feeling she does not synchronise with the adult world
    - Taking refuge by isolating herself, or retreating within the group of school friends, or joining a group of friends

- Middle phase of adolescence (13 to 17 years of age)
    - After the awakening of the "ego" comes the conscious discovery of the "ego" and of her own intimacy. Introversion now takes place, as the adolescent during this phase needs to live within herself.
    - Timidity is a characteristic of this phase, fearing the others' opinions, motivated by lack of trust in herself and in others.
    - There is an internal or personality conflict.
    - Negative behaviours, non-conformity and aggressiveness towards others are caused by the frustration of feeling that she is able to look after herself.

- Later phase of adolescence (16 to 22 years of age)
    - She starts understanding and finding herself and feels in a more positive manner integrated in the world in which she lives.
    - She shows significant progress in terms of overcoming timidity.
    - She shows calmer behaviour, but she is more vulnerable to difficulties.
    - She has better self-control.
    - This is the time to take decisions about the future, studies, etc.
    - She starts planning her life.
    - She establishes more personal and deeper relationships

(http://paginaseducacao.no.sapo.pt/etapas, 18.07.2005)

2.3.3.5 Behavioural changes during adolescence

Gláucia Bueno (2006:29), in their article on the difficulties of accessing contraceptives, define adolescence as a period of testing and reorganising everything one learnt during childhood, which presupposes challenging, experimentation and risk. "One risks what one is still not, in an attempt to build one doesn't know what".

Diegues (2003:10) refers to adolescence as a life cycle which is generally healthy, but vulnerable due to the different ways in which risk situations can be dealt with by adolescents.

Furthermore, Diegues (2003:10) points out that it is during this period that she establishes a framework of her own values, develops and consolidates her identity, and develops and acquires social, psychological and affective competencies, aimed at a life plan of which adolescence is an integral part and which in the end starts from the moment our parents dream about having us. Thus adolescents develop the capability to get involved and establish intimate and love relations.

Nodin (2001:10), in an article about sexuality and emotional relations in young adults, states that adolescence is a period in which the physical growth and biological maturity occur hand in hand with the discovery of the social environment outside the family, while the discoveries which will enable entering the so-called adult world occur one after the other.

One can position adolescence in the period between the beginning of puberty, characterised by the appearance of the reproductive capability, and the beginning of the adult phase. This definition makes it difficult to stipulate strict time limitations for this phase of life as, more and more, the beginning of the adult phase is characterised by extending the situation of dependency on the parents due, amongst others, to economic and emotional factors.

The authors indicated in the previous paragraphs and in other sources consulted unanimously state that in fact there is no exact definition of what is adolescence, and that various factors must be considered to determine adolescence. At the same time they all acknowledge that this is a period of major change which occurs at various levels, and because of this, special attention must be given to this phase of one's life.

The social dimension of the period of maturity development of the adolescent depends largely on the cultural context: a young girl of 15 years of age can be considered within a specific society as a child, in another as an adolescent and in a third social context as an adult. Studies in this regard demonstrate, however, that during this phase, from a biological point of view, the young girl is still in a phase of development. Because of this there is a risk in terms of a pregnancy.

According to Maslow's theory, basic human needs are organised and arranged in levels, within a hierarchy of importance, a pyramid where the physiological needs are at the base and the higher self-fulfilment needs are at the top. When a need within a lower level is fulfilled, it is no longer a behaviour-motivating need, and provides an opportunity for the development of needs at a higher level (www.ufrgs.br/eenf/DiscipInasEnf/adm/téoria%20comportamental.ppt,14.09.2006).

This means that when an adolescent is forced by circumstances to "skip levels" during adolescence, she ends up, most of the time, losing motivation for self-fulfilment. The adolescent becomes an unhappy adult. Many such girls did not receive adequate guidance during adolescence, and therefore their emotional development was blocked. This gives rise to unhappiness, distress, anti-social behaviour and conflict, which will negatively influence their relationships in general. The adolescent receives this negative influence either through a repressive type of education or through indifference, and ends up learning from the adults closest to her.

Costa (2000:4) points out, however, that when those experiences are positive, the feeling of rejection is overcome and there is a growth in self-esteem. The contact with positive emotions is what will enable or facilitate establishing social and emotional links, which are essential prerequisites for a healthy sexual life.

It is necessary, therefore, to reflect more profoundly on these issues of adolescence, as all of us wish to partake in a more free, open and just society. And in the context of this study, the issue of sexual enjoyment is also fundamental and should also be included.

2.3.4 Adolescent

2.3.4.1 Definition

Nodin (2001:16) defines an adolescent as an individual living through a period of major change at various levels: physical, family, social, emotional and personal. It is during this phase that, in a way, the adolescent becomes a person, tries to become autonomous and tries to determine her position in the world, something necessary to give some significance to her own existence.

In the English language, originally the term "teen", an abbreviation of "teenage", was used to indicate an age group from 11 to 19 years of age. The recent meaning of the word "teen-adolescent" came into use only during the 20th century (http://pt.wikipedia.org/wiki/Adolescente, 18.09.2006).

During this period of life many children go through physical stages of puberty, which generally start between the ages of 9 and 13. Many cultures recognise them as "becoming adults" at different ages. For example, in the Jewish tradition, 13-year-old male children and 12-year-old female children are considered as adult members of society, and this transition ceremony is designated as Bat Mitzvah for the young girls and Bar Mitzvah for the young boys (http://pt.wikipedia.org/wiki/Adolescente, 18.09.2006).

Each country's legislation determines the formal age for emancipation (coming of age), when adolescents start being considered as adults. In Angola, for example, adolescents are considered as emancipated from 18 years of age.

When reflecting on the definitions of adolescent and adolescence, there are, in reality no differences, as the various authors refer to a period of change, at various levels, which varies, on average, between 10 and 20 years of age.

2.3.4.2 Building up the adolescent identity

Some important conflicts may come up during the building up of the adolescent identity. The course the adolescent takes in her life ends up influencing society, which demands from each individual a social role, preferably defined and as definite as possible. During the phase where the identity of the adolescent has not yet been completed, it becomes difficult to talk about a definite social role.

Costa (2000:54) states that due to the fact that self-affirmation often occurs through "I am what the others think of me", passion emerges as a search for identity and love, i.e., the desire to be loved. Passion also emerges as a volcano, pouring out all the energy which had been repressed till then. This period of life is very important. For the parents it means "losing" their child. The daughter who until then lived under their control starts having her own opinions, starts demanding more autonomy and more power of decision.

Physical changes are followed by changes in attitude and behaviour. Suddenly the adolescent sees herself taking on an identity and a sexual role, trying to adapt to social patterns, according to the culture in which she lives. The adolescent then starts to feel strongly the role which society imposes and demands from men and from women (Costa 2000:54).

Within the social core which is the family, the difficulties of the adolescents are not always brought to the surface in order to be better understood. As a consequence, they search for the answers to many of their doubts outside the home, by chatting to their friends, receiving possibly misleading or malicious information, and through fears and fantasies (Costa 2000:54-55).

During this phase, adolescents often yearn with enthusiasm for new sensations, and start smoking, drinking alcohol or using drugs, as a means of affirming a certain independence. The biological-psychological revolution of adolescence can also bring

about some negative school performance (http://gballone.sites.uol.com.br/infantil/adolesc3.html).

2.3.4.3 Physical development and changes in both genders

Generally from the age of ten the girl grows several centimetres in a short time; her waist is more defined; the hips widen and the breasts start growing; and fine hairs appear in the pubis and armpits (Costa 2000:56-66).

In some boys, from the age of eleven, one can notice a certain increase in the size of the testicles and perhaps the appearance of some pubic hair, but these changes are not so obvious as those which occur in the girls with the same age.

From 14 years of age the girl has usually already started menstruating. At the same time, the nipples darken and the sudoriferous glands of the armpits, groin and around the nipples become more active. These changes create a certain feeling of insecurity and discomfort in the young girl, culminating in the first menstruation. During the two years following menstruation the cycles can still be irregular, longer or shorter (Costa 2000:56-66).

The transformations noticed during the pre-puberty phase are the result of the activity of the ovaries, under the influence of the hypophysis. At birth, the young girl has between 200 000 and 400 000 ovules in the ovary, of which only about 400 will be utilised throughout the fertile period (up to 50-55 years of age).

For the young boy, the transformations start a little later, around 13 years of age, and take much longer than in the girls. The first signs of this transformation are, basically, the increase in the genital organs, the appearance of a beard, and hair in the pubic area, on the legs, arms and chest (Costa 2000:56-66).

At 14 years of age the boys continue to develop: there is a rapid increase in height and weight, the shoulders and the thorax expand, and normally they eat more. As the larynx grows, the voice starts to deepen and when he swallows one can notice the Adam's apple (Costa 2000:56-66).

By 17 years of age, the girl's voice has matured, the hips are wider and the menstrual cycle is regular. The breasts are fully developed, which means she has reached her sexual maturity.

By the same age the boy shows all the signs of an adult. The skin in the scrotum darkens, the penis grows and usually it is possible to ejaculate sperm. The hairs in the pubic area and the armpits become curly and thick, and facial hair starts growing. Hair can also appear in other parts of the body such as the chest, the abdomen and the back, but that depends on hereditary conditions. The sudoriferous glands in the armpits, in the groin and around the nipples develop. Boys continue to grow and to develop physically up to the age of 20 (Costa 2000:56-67).

2.3.4.4 Emotional changes and the role of the sex hormones

The emotional development of the human being is something dynamic and continuous, as it modifies and restructures individuals. During this course there are marked and decisive phases, which mould the individual characteristics and are events that may easily be overcome or may be extremely conflicting, and which can end up in a crisis situation (Costa 2000:112).

The influence of sex hormones on emotional changes is marked. Physical changes occur together with emotional changes, also brought about by sex hormones.

Hormones are chemical substances secreted in the bodily fluids by a cell or a group of cells, and have a controlling effect on other cells of the body. Therefore, sexual hormones are substances which control the cells that constitute the sexual tissues, which, in turn, form the sexual organs. The hormones are progesterone and oestrogen in girls, and testosterone in boys. Both in girls and boys, these hormones stimulate the interest in sexuality and increase the natural will for affirmation.

The two types of ovarian hormones that are secreted by the ovaries in response to the two hormones of the adenophysis gland are oestrogen and progesterone. Oestrogen mainly promotes the proliferation and growth of specific cells of the body and is responsible for the development of the majority of secondary sexual characteristics of the female. Progesterone is related almost entirely to the final preparation of the uterus

for pregnancy and of the breasts for breastfeeding. During childhood, oestrogen is secreted only in small quantities, but after puberty, under the influence of gonadotrophic hormones, this quantity increases by twenty times. At this time, the female sexual organs acquire adult characteristics. There is an increase in the size of the fallopian tubes, of the uterus and vagina, as well as the external genitalia, with fat being accumulated in the veneris mons and the labia majora, and an increase in the labia minora. Besides increasing the size of the vagina, oestrogen increases the vaginal epithelium from the cubic type to the stratified type, and this epithelium is more resistant to infection. A few years after puberty, the size of the uterus doubles or triples. More important than the increase in size are the changes occurring in the endometrium through oestrogen, as it produces a more noticeable proliferation of oestrogen, and the development of glands which later will be used to assist in the nutrition of the implanted egg. Oestrogen has an effect on the epithelium which covers the fallopian tubes, similar to that exercised over the uterine endometrium, which leads to the proliferation of the glandular tissue and produces an increase in the number of cells which cover the fallopian tubes. The activity of the cilia is increased considerably and these move towards the uterus. This assists in propelling the fertilised egg towards the uterus (Hall & Guyton 2002:869-875).

Oestrogen also causes an increase in osteoblastic activity and therefore, in puberty, when the girl enters the reproductive period, her growth rate is very fast for several years. Meanwhile, oestrogen has another effect on the growth of the skeleton, having the same effect that testosterone has on men, and as a result, usually the growth of young women stops many years before that of young men (Hall & Guyton 2002:869-875).

Oestrogen has a special effect on the widening of the pelvis, changing its narrow contour, in the shape of a funnel in a man, to a wide and ovoid shape. The functional importance of this change for the growth of the baby is obvious. The most important function of progesterone is to promote secreting changes in the endometrium, thus preparing the uterus for the implantation of the fertilised egg. It reduces the frequency of uterine contractions, thus assisting in expelling the implanted ovule. This hormone also produces a change in the secretion of the mucous of the uterine tubes. These secretions are important for the nutrition and division of the fertilised egg, when it crosses the uterine tube, before being implanted.

Progesterone promotes the development of the breast lobules and alveoli, as mentioned before, thus causing the proliferation of the alveoli cells, increasing them and making them naturally able to secrete. It is not involved in producing milk (Hall & Guyton 2002:869-875). This hormone leads to the swelling of the breasts, due partly to the secreting development of the lobules and alveoli, and, it also seems, as a result of the increase in liquid within the actual subcutaneous tissue (Hall & Guyton 2002: 869-875).

The hormonal changes and occasional incapacity or reluctance to adapt to the physical changes also contribute to depression of some kind, which is characteristic of adolescents. One observes periods of intense physical energy and enthusiasm alternating with marked uneasiness. One can also often observe a reaction of rebelliousness, hostility and irritability, due to the hormonal changes which occur during this period.

In view of all the physiological aspects mentioned above, we can conclude that a pregnancy during adolescence, when the organism is preparing for the adult phase, can bring about various irreversible complications for a woman's organism.

2.3.5 Reproductive health

2.3.5.1 Definition

Reproductive health is a state of total physical, mental and social well-being and not only the absence of disease or infirmity in all aspects related to the reproductive system, their function and operation (Rita et al 2004:15). Moreover, sexual and reproductive health implies that the person is able to enjoy satisfactory and risk-free sex, is able to have children with the freedom to decide when and how often; has the right to be informed about and to have access to efficient, safe and acceptable methods of family planning, and access to comprehensive care services which enable her to have a healthy sexual and reproductive life (Rita et al 2004:15).

Within this definition, reproductive health care consists of a variety of technical services and methods which contribute to ensuring reproductive health and well-being, through the prevention and resolution of problems and by meeting needs throughout the life cycle of the individual.

2.3.5.2 Reproductive health in Angola

Reproductive rights are based on the acknowledgement of the basic right of all couples and individuals to freely and responsibly decide whether they want to have children or not, to decide on the number of children they want, when they want to have them and how often. It involves the right to have information and the means available to make these decisions, as well as the right to reach the highest level of sexual and reproductive health. It also includes the right to take decisions with regard to reproduction without suffering discrimination, coercion or violence (United Nations Conference on Population, held in Cairo in 1994 and the World Conference on Woman, held in Beijing in 1995).

The Angolan Government is signatory to the Action Programme that followed the Cairo Conference held in 1994, on Policies and Norms on Sexual and Reproductive Health. Accordingly it has formulated a strategy for the success of that programme: the reduction of poverty, implementation of immediate actions aimed at reducing maternal and child morbidity and mortality, the use of contraceptives, the practice of family planning and the promotion of sexual and reproductive health, and free choice for women, adolescents and adults with regard to a better sexual life.

In the light of this important strategy, the Ministry of Health has been developing various activities aimed at reducing maternal and neonatal morbidity and mortality, and has created, at the level of the Province of Luanda, the Monitoring Committee for Maternal Deaths.

2.3.6 Pregnancy in adolescence

2.3.6.1 Definition

Consideration of pregnancy in adolescence must take into account both the immaturity of the adolescent's body (from a biological point of view) for a pregnancy, and the emotional immaturity of the adolescent as a person, considering the involvement of many aspects of life, such as study, work, and self-support (Furlani, in www.jimena.net, accessed 18.07.2005).

Fraser et al (2006:12) use the term "pregnancy in adolescence", which means an early pregnancy, in view of the fact that the definitions above are unanimous in stating that during the adolescent phase a series of emotional, psychological and social changes occur. Thus, pregnancy is not merely a biological entity but also a socially construed phenomenon.

It is easy to understand that, for a body still undergoing transformation in physical, endocrine and psychological development, pregnancy, labour, puerperium and lactation can have far-reaching effects. Nevertheless, the world has been witnessing an increasing trend of very young mothers.

According to Ballone (2003:5), pregnancy in adolescence is, therefore, a problem which must be taken very seriously and must not be underestimated, just as the actual delivery process must be considered very seriously. This can become difficult due to anatomical problems commonly related to the adolescent, such as the size and shape of the pelvis and the elasticity of the uterine muscles. In addition there are fears, lack of information and the fantasies of the child now becoming a mother, besides very important psychological and affective elements which may possibly be present.

Pregnancy in adolescence is a complex, pluricausal event, which can jeopardise the path of life, and sometimes even life itself. Various factors are suggested as contributing to the occurrence of pregnancy in adolescence, the main ones being: biological factors, family factors, social factors, psychological factors and contraception.

2.3.6.2 Biological factors

Biological factors encompass issues relating the earlier occurrence of the first menstruation to the increase in the number of adolescents in the general population. As the first menstruation period is the organic indication which reflects the interaction of the various segments of the female neuendocrine segment, the earlier this happens the more exposed the adolescent is to pregnancy (Baldwin & Cain 1980, in http://www.brazilpednesws.org.br/set2001/bnpar101.htm).

2.3.6.3 Family factors

The family context has a direct influence on the time when sexual activity starts. Thus, adolescents who become involved in sexual activities at a very young age or who fall pregnant during that time usually come from families whose mother also became sexually active at a very young age or became pregnant during adolescence. In any case, the younger and more immature the parents, the higher the probability of family imbalance and separation.

2.3.6.4 Social factors

Individual attitudes are influenced both by the family and society. Society has undergone profound changes in its structure, tending to better accept sexuality during adolescence, sex outside marriage, and also pregnancy during adolescence. Therefore, the taboos, the inhibitions and the stigmas have decreased and adolescent sexual activity and pregnancies have increased. (McCabe & Cummins 1998; Moderado & Lyra 1999 in http://www.brazilpednesws.org.br/set2001/bnpar101.htm). Depending on the social context to which the adolescent belongs, pregnancy can be viewed as a normal, non-problematic event, accepted within its norms and customs.

Amongst the factors which contribute to adolescent pregnancies happening in large numbers are the lack of future perspectives found amongst youngsters from a lower social class, who end up considering having a child as giving them the chance to gain a definition in life, giving them the opportunity to build their own identity, as they cannot become involved in a professional career. Other circumstances found among the population who fall pregnant during this period include broken homes and a low level of communication between parents and children.

Testa (1992) as accessed in http://www.bireme.br/bvs/adolec/p/cadernos/capitulo/cap23/cap23.htm, also points out another factor which contributes to a high incidence of early pregnancies: as it has become natural for adolescents between 10 and 12 years of age to already have a notion of their own sexuality, perhaps this fact leads them to consider themselves capable or ready to become pregnant at 15 or 16 years of age. However, most of the time, these young girls do not have an adequate

physical structure for pregnancy, and are also not prepared from an emotional, social, physical and cultural point of view, to have a child and look after the child.

2.3.6.5 Psychological factors and contraception

During adolescence, the use of contraceptive methods does not occur in an efficient manner, and this is linked conclusively to psychological factors inherent to this period; the adolescent denies the possibility of falling pregnant, and the lower the age, the greater the denial. Sexual encounters occur in a casual manner, no responsibility being taken by the participants with regard to their sexuality and the use of contraceptives. Pregnancy and the risk of falling pregnant can also be associated with a low self-esteem, inadequate family functioning and the meaninglessness of activities undertaken during free time. Lack of support and affection by the family can lead to the girl seeking early maternity as the means to achieve unconditional love, perhaps her own family, thus reaffirming her role as a woman (McAnarney & Hendee 1989; Stevens-Simões et al 1996 in http://www.brazilpedneswsorg.br/set2001/bnpar101.htm,).

Studies performed in various countries during pregnancies in adolescence have indicated that adolescents have knowledge of contraceptive methods but do not use them for various reasons. The challenge for the health professionals and educators is to link this knowledge to an effective change in the sexual behaviour of adolescents, aimed at safe sex http://www.bireme.br/bvs/adolec/p/cadernos/capitulo/cap23/cap23.htm, 10-03-2005).

According to Testa (1992) (in http://www.bireme.br/bvs/adolec/p/cadernos/capitulo/cap23/cap23.htm, 10.03.2005), teenage paternity and maternity were in the 1970s, and still are, identified as a public health problem. The prognosis formulated at that time was that the rates would reduce through sexual education of adolescents, through access to contraceptive methods and through legalised abortion. However, despite the fact that the present birth rate in the United States is lower than in the 1950s, the reduction of pregnancy in adolescence has not been significant since the 1970s. Between 1986 and 1989 that rate, with regard to the adolescent population, increased by 15% (National Centre for Health Statistics, 1991; Apud Testa 1992). This increase in rate has concerned experts, who carry out tests and propose various interventions.

Singh (1998:11) points out that from the second half of the 1980s, adolescent health in general and adolescent pregnancy in particular, have become issues of relevance in public health, especially in the developed countries, giving rise to different points of view from the various disciplines, especially demography, medicine, epidemiology and social psychology.

2.3.7 Sexuality in adolescence

2.3.7.1 Definition

According to Diegues (2003:11) sexual maturity of the adolescent happens quickly, simultaneously with emotional and intellectual maturity, thus giving rise to yearnings for independence, which end up generating thoughts and attitudes with regard to partners and to professions in particular.

Diegues (2003:10) states that sexuality is a positive energy that we are born with and is multidimensional (underlining its highly relational and intimate human dimension). Diegues (2003:10) points out that the adolescent male, urged by his instincts, together with his need to prove to himself his own virility and independent determination to "conquer" the person of the opposite sex, easily goes against the traditional norms of society and family advice, and eagerly starts exercising his own sexuality.

The sexual activity of the female adolescent is generally casual, which explains why many do not use contraceptives on a routine basis. The majority of female adolescents also do not discuss with their family their own sexuality, or the fact that they have contraceptives, which would reveal an active sexual life. Thus, besides being influenced by the lack of or inadequate use of contraceptives, pregnancy or the risk of falling pregnant can also be associated with a diminished self-esteem, or an inadequate family functioning.

In this regard one can conclude that personal attitudes and beliefs related to more specific aspects of sexuality become more and more important, as these are facts which can influence the health of the individual, and as such also her integrity at various levels.

As can be seen, there is a consensus amongst various authors such as Costa (2000), Nodin (2002) and Diegues (2003) that adolescence is the period of the life in which the adolescent experiences various physical and emotional changes, for the majority of whom it is a conflict or a crisis. One cannot describe adolescence as a simple adaptation to body transformation, but as an important period in the existential cycle of a person, a taking of a standpoint within a social, family, sexual, and group environment.

Because of this, the parents, the health professionals, the educators and society, in helping the adolescent to deal with her sexuality, must follow very closely the development of adolescents so that no irreparable problems arise.

Heaven (1002:12) states that the adolescent acquires hypothetical and deductive abstract thinking. She has the capacity to develop reasoning about concepts such as "doubt", "idea", "soul", "God", etc. The adolescent enters the world of philosophy and also of pure mathematics to resolve, mentally, more complex exercises. In this phase, the adolescent enters into the potential of her new thinking. The adolescent thinks she can control and improve the world; there is a hope and willingness, often the result of a complete idealism. There is a new egocentrism, the adolescent thinks everything must revolve around her; she seeks to be different as well as autonomous from parents and from adults.

Moreover, adolescence is not only marked by difficulties, crisis, uneasiness and distress. When one abandons the childish attitude and enters the adult world, there are a series of gains in terms of psychic output. The intellect, for example, shows more efficiency, swiftness and innovation; language becomes more complete and complex with an increase in vocabulary and expression (http://www.estadao.com.br/agestado/nacional/2000/jul/13/13.htm).

From the researcher's perspective, this good side of adolescence must be maximised by health professionals and educators who specialise in the topic of sexuality in adolescence. When dealing with adolescents we capitalise on the new capabilities and reaffirm the good, thus facilitating and motivating communication.

2.3.7.2 Physiological changes

Puberty marks the awakening of sexuality, which changes the little boy or little girl into adult individuals. For little girls, puberty is marked by the first menstruation. For little boys there is no specific event that marks the beginning of puberty, as this is all part of a process, until they can have a full ejaculation, that is, they can have enough sperm to fertilise a woman. Such changes and many others are the result of the releasing of hormones, which we have already alluded to under the discussion of the adolescent.

Hormonal factors responsible for these changes can be divided into three levels:

(i) increase in the stimulation of a nerve mechanism which had, until then, been inhibited
(ii) secretion of hormones from the ovaries and testicles
(iii) changes which determine the development of primary and secondary sexual characteristics, changes in the size of the body, physical strength and motor ability (Hall & Guyton 2002:869)

As discussed above, in the primary sexual characteristics there are changes that occur related to the reproductive organs, such as for example, the growth of the penis and of the scrotal sac of the man, and in the woman, the growth of the uterus and the ovaries. The secondary sexual characteristics occur in the body in general: the appearance of hair, distribution of fat, deepening of the voice. Insufficient production of hormones affects the normal growth of the ovaries and testicles. It can cause, as a consequence, the immaturity of these organs and the absence of secondary characteristics. If the production, on the other hand, is excessive, sexual development could be premature.

2.3.7.3 Female sexual development

As already pointed out, the appearance of the first menstruation signals the beginning of puberty. It is an important and significant event, as the physiological phenomena which from that moment will recur regularly, every month, mean the young girl is capable of having children. This maturity does not only include pregnancy. Before aspiring to be a mother, the young girl aspires to be a woman. The pituitary gland is responsible for this series of transformations; this is situated at the base of the brain, and secretes other

hormones: growth hormone (GH), which acts upon both genders; the Follicle Stimulating Hormone (FSH), responsible for the development of the follicles in the ovary, regulating the secretion of oestrogen by the ovary and also responsible for ovulation; and the luteinising hormone (LH), which works on the ovary together with the FSH, making the follicle liberate the ovule. These still work on the follicle after ovulation, transforming it into a yellow body, so called because the cells of the follicle wall secrete a fatty yellow substance. This yellow body secretes progesterone, which has the function of preparing the uterus for an eventual nesting of the egg (Hall & Guyton 2002:869-875).

Oestrogen is responsible for the stimulation and development of the mammary glands and other female secondary characteristics, as well as the development of the primary characteristics, which are the internal and external genital organs. The growth of the follicles occurs in the ovary, the first stage of ovulation, during which the oestrogen hormone is produced. In general only one follicle can release its egg in each cycle. The remaining eggs will ripen. The formation of the yellow body occurs after the rupturing of the follicle, and stimulates the production of another hormone, called progesterone, which in turn modifies the endometrium (the uterine mucous membrane) to receive the egg and to maintain the foetus in the uterus. The first menstruation occurs when the ovary can produce those hormones at a sufficiently high rate to develop the mucous membrane which covers the uterus. The uterus starts getting ready to receive an egg every month, through the “message” sent by the hypophysis and sexual hormones. Should the egg not be fertilised, this mucous membrane will be expelled from the organism through a uterine scaling in the form of a haemorrhage (menstruation) (Hall & Guyton 2002:869-875).

According to Costa (2000:62), research done in this regard has shown that, together with menstruation, various other factors occur, such as a tendency to avoid physical activities due to a certain tiredness; increase in the feeling of discomfort; headaches; increase in the volume of the abdominal area; constant need to urinate; and breasts feeling slightly swollen and very tender, which can even become painful.

With regard to the development of the breasts, these have a continuous development in a regular sequence. During infancy, only the nipple is visible above the areola. Around 10-11 years of age, the development reaches the “bud” stage. In the following years,

the girl moves from that stage to the one of primary breast development, during which the areola rises above the actual wall of the breast. Lastly, she reaches the stage of full breast development or secondary stage (Costa 2000:62).

2.4 CONSEQUENCES OF PREGNANCY IN ADOLESCENCE

According to Costa (2000:109), during the first years of adolescence the menstrual cycles are mostly non-ovulation cycles; they start being ovulation years as the cycles become more regular, acquiring regular intervals and quantity of flow. When all this occurs the young girl is already a fertile woman.

The process is however not so simple: it is an evolution process, long and marked by important and definitive transformation in the body, endocrine and psychic systems of the adolescent, all of them of equal and relevant importance. From an endocrinological point of view, it is during this phase that the hypothalamic maturation starts and gradually starts the secretion of its releasing neuro-hormone which is secreted in the most central part of the brain and regulates the activity of the hypophysis; this releasing neuro-hormone is also indirectly controlled by the brain cortex. Thus one can understand why emotional problems can, through that circuit, appear both during ovulation and menstruation (Costa 2000:109).

Pregnancy in adolescent girls presents anatomical problems, such as uterine immaturity, which frequently leads to miscarriages or premature births; and imbalance of the endocrine system, which can cause hormonal imbalances, with negative consequences for the normal evolution of gestation. The more serious problems related to pregnancy occur with regard to the mental state. If pregnancy in adolescence is considered as a foreseeable crisis situation, then we have to consider the serious situation of a “crisis within a crisis” which can lead the adolescent to a depressive situation (Costa 2000:111).

Childbirth, for this woman who is mentally not prepared and is in a panic, is characterised by inadequate behaviour, which, in many cases, leads to functional dystocia and subsequently increases the incidence of birth by caesarean section. Even when deliveries are normal, because of the lack of elasticity, these may be slow and difficult and can cause lesions and ruptures (Costa 2000:111).

When sexual involvement results in an early pregnancy, it has subsequent long-term consequences, both for the adolescent and for the newborn and for society. The adolescent could have growth and development problems, behavioural and emotional problems, besides complications during the pregnancy and problems with the delivery. The precarious conditions of nutrition in developing countries further compromise pregnancy in adolescence. Moreover, adolescents, feeling pressured and experiencing hostility from the family, tend to hide the pregnancy, avoiding food to hide their weight gain, and thus worsen even more their physical conditions, putting in jeopardy the weight of the newborn.

Pregnancy in adolescence constitutes a challenge for health professionals, educators, governments and society in general, and could have social, emotional and physical consequences, which are intertwined. Early pregnancies are also associated with a high incidence of STDs, such as Hepatitis B, Hepatitis C, HIV, syphilis and gonorrhoea, due to the fact that the adolescent does not have regular sexual activity, does not use condoms, and a large number of these sexual encounters are impulsive, which aggravates the risk of contamination. Often the possibility of abortion is the initial consideration, and many adolescents have lost their lives as a consequence of illegal, unsafe and criminal abortions.

For various reasons, the majority of adolescent boys do not accept the responsibility of having fathered the child; in other instances the father is an older man already committed. Sometimes there are unusual situations where the parents (boys and girls) continue living in the same house as their parents and continue having a love relationship, but even in those circumstances the future is always dubious, as during the course of this relationship more problems constantly arise and this relationship often does not go smoothly even with the support of the family members (http:/www.brazilpednews.org.br/set, 2005).

Early pregnancy, which could also lead to early labour, involves various risks already referred to, such as interruption of the evolution process of growing up, which causes adolescents to “skip” stages of life as children and adolescents and become adults; having to interrupt their studies, limiting their professional quality; lack of support from family and friends; conflict from preconceived ideas; creating a family with the risk of it being soon dismantled; or various complications arising from illegal abortions, which

can cause various physical and psychological consequences, often irreversible. (http://www.tdah.com.br/paginas/gaetah/Boletim5.htm).

Because of the girls' immaturity and emotional instability, important psychological changes can occur, making it very difficult to adapt to their new condition, exacerbating feelings which already existed before the pregnancy, such as anxiety, depression and hostility. The rates of suicide amongst pregnant adolescents are higher than amongst non-pregnant adolescents (http://www.brazilpednews.org.br/set2001/bnpar101.htm,).

Various psychosocial factors have been found to be associated with teenage pregnancy; for example, teenage mothers are more likely to have lower self-esteem, be alienated from their own mothers and isolated from female friendships. Teenage mothers are quite likely to be under-achievers at school, to have unmarried sisters with children, and to exhibit feelings of inadequacy and unworthiness. They are also likely to have a history of skipping school, delinquency and rebellion. Adolescent mothers could be dissatisfied with family relationships and their body image, and lack purpose in life. Furthermore, adolescent mothers are likely to come from lower socio-economic backgrounds and from single-mother families. They are also more likely to begin sexual activity at an earlier age (Fraser et al 2006:22).

Angola has a very high rate of adolescent pregnancy. The average age of the mother is about 18 years (Cronje & Grobler 2003:665). The mortality and morbidity amongst babies born to these mothers is higher and the mothers show a higher rate of developing complications such as hypertensive disorders and intrapartum complications. In adolescents under 16 years an incompletely developed pelvis may be responsible for higher rates of cephalo-pelvic disproportion, which might result in obstructed labour (Cronje & Grobler 2003:665).

2.4.1 Consequences to the newborn

According to Regina (in http://elogica.br.inter/lumigun/texgund1.htm,) during adolescence pregnancy can be lived with much suffering, as an experience in disarray, giving rise to feelings of guilt and sin, requiring individual and family adjustments. When faced with pregnancy, the adolescent will have to decide the future in terms of the child

that will be born: will she be taking responsibility for the child; will she interrupt the pregnancy; or give her child for adoption?

There are risks, both physical and immediate, as well as long-term psycho-social consequences, for children of adolescent parents. Because of the difficulty in adapting to her new condition the adolescent mother can end up abandoning her child, giving the baby up for adoption; even when the newborn is not abandoned, he or she is more prone to being ill-treated by the population in general.

The decision to consent to giving the child for adoption is a "decision that, even with clear motivation, does not exclude suffering. It is always a difficult time of separation, and is emotionally powerful, which does not put into question the decision taken, nor must it indicate any going back on the decision taken; we have ascertained that adoption is often the only way to break a generation chain of "dissociated" families".

Among these babies there is a higher incidence of premature babies, with low weight at birth and low Apgar, of respiratory diseases; of obstetric trauma, and a higher incidence of perinatal diseases and child mortality. One must take into consideration that these risks are associated not only with the age of the mother but mainly with other factors such as low levels of school education, inadequate or complete lack of pre-natal care, low socio-economic level, short intervals between pregnancies (less than two years) and a compromised maternal nutritional state. These biological complications tend to be more frequent the younger the mother, or if the gynaecological age is less than two years (Correia & Coates 1993 in http://www.brazilpednews.org.br/set2001/bnpar101.htm).

The Pan-American Health Organization has attributed the increase in the number of children of minor mothers below 20 years of age to the fact that the "knowledge of freedom in sexual relations is divulged more quickly amongst adolescents than the knowledge on the adverse biologic and psychological effects of pregnancy at that age, both for the mother and the child". (http://www.brazilpednews.org.br/set2001/bnpar101.htm).

2.5 SITUATION IN THE DEVELOPING COUNTRIES WITH SPECIFIC REFERENCE TO ANGOLA

Let us consider then what happens in developing countries where there are few means of information and communication and where adolescents have few opportunities to plan.

Early pregnancy is one of the main obstacles to the improvement of the status of developing countries. At global level, nearly 15 million adolescents, per year, have children, of these more than 80% in developing countries. The high levels of pregnancies, usually undesired, amongst adolescents, resorting to unsafe illegal abortions, in addition to promiscuity, the high number of youngsters with HIV/AIDS, low socio-economic levels and poverty, are associated with the reversal of values currently registered in the underdeveloped countries (Regina in http://elogica.br.inter/lumigun/texgund1.htm, 21.09.2005).

The demographic, socio-economic and epidemiological profile of Angola demands serious measures based on studies of the real needs of adolescents. Pregnancy in adolescence carries serious risks for the adolescent, family, child and society, and for this reason, the researcher is concerned about the future of adolescents in a country which is being reorganised after many years of armed conflict, where maternal and neonatal mortality is the highest in the world. The researcher was motivated to research the knowledge of adolescents with regard to the consequences of pregnancy, and on the basis of the results of the research, to propose measures for intervention aimed at preparing adolescents for a conscious and safe sexual and reproductive life.

2.6 CONCLUSION

Chapter 1 introduced the background to the study on the research topic, which consists of obtaining information on the knowledge of adolescents about the implications of pregnancy. The literature review, presented in Chapter 2, was guided by the research topic. Thus it was extremely important, to consult studies carried out in this area, to consult bibliographies on adolescence, periodicals, the Internet and other sources which contributed to better informing the researcher on this issue. The content researched was organised and described according to the following structure: definition of key

concepts related to: knowledge, adolescence, adolescent, reproductive health, pregnancy. Aspects related to the stages of adolescence, characteristics, physical and emotional development, anatomy and physiology, pregnancy in adolescence, the consequences of pregnancy in adolescence and safe sex were also described.

Chapter 3 describes the research design and methodology.

Chapter 3

Research methodology

3.1 INTRODUCTION

In this chapter the research design is discussed in terms of methods, population, sampling, instrument, data collection and analysis procedures as these pertain to the present research. The chosen research design enabled the researcher to achieve the purpose and objectives of the study.

3.2 AIM AND PURPOSE OF THE STUDY

The aim of the study was to propose strategies to promote the reduction of early pregnancies in adolescents in Angola. The purpose of the study was to explore the knowledge that female adolescents in the Bengo province of Angola have about the implications of pregnancy.

The objectives of the study were to

- analyse the knowledge of female adolescents in the Bengo province of Angola about the implications of pregnancy
- recommend guidelines on health education programmes for adolescents to schools and health professionals.

3.3 RESEARCH QUESTION

The research question to achieve the objectives was as follows:

- What is the knowledge female adolescents in the Bengo province of Angola have of the implications of pregnancy?

3.4 RESEARCH DESIGN

Polit, Beck and Hungler (2004:164) state that a research design is an overall plan for obtaining answers to questions being studied, and pointing out the difficulties which may arise during the research.

3.4.1 Selected design

A quantitative, descriptive, non-experimental and contextual research design was utilised to describe the adolescents' knowledge with regard to the implications of pregnancy. The main aim of the research design in quantitative studies is to maximise the researcher's control over the situation under research (Polit et al 2004:184).

3.4.2 Quantitative

Quantitative research is a systematic process of obtaining formal objective data to describe the variables and their relationships. According to Polit et al (2004:438), quantitative research are studies of phenomena which are suitable for being measured with precision and being quantified, frequently involving a strict and controlled design.

The design was quantitative in that the strategies the researcher planned to adopt to collect information were spelt out in advance, that is in numeric form. Polit et al (2004:165) describe quantitative research as a formal, objective and systematic process to obtain information and to describe variables and their relationships.

In this study, the research design was quantitative, as the researcher used a structured interview schedule to collect data from the respondents. This method allowed the researcher to ask all the respondents the same questions with predetermined responses, which allowed objective data to be collected throughout the study. The researcher also used frequency tables and graphs to analyse and interpret the findings.

Polit et al (2004:167) add that quantitative research is closer to the positivist tradition and has as its aim identification, description, exploitation, explanation, prevision and control. In terms of description, quantitative research questions the predominance of the phenomenon and how frequently it occurs, and indicates its characteristics. With regard to exploring the topic, it refers to which factors are related to the phenomenon, which

are the measurable associations between the phenomena, and which factors cause the phenomenon. In terms of prediction and control, quantitative research indicates what will happen if we alter the phenomenon or introduce an intervention; it determines if its occurrence can be controlled, and how we can make the phenomenon happen or alter its nature or prevalence.

Polit et al (2004:182) point out that in quantitative research, the theories are used deductively as a basis for generating explanations which are then tested empirically. That is, on the basis of a previous theory or group of evidence, the researcher makes specific explanatory predictions which, if they prove to be supported by the data, add more credibility to the theory.

3.4.3 Descriptive research design

The descriptive element in the design offered a complete description of the phenomenon within a given population without attempting to establish causality or manipulation of the variables or the phenomenon (Polit et al 2004:177). The design is also consistent with the definition of LoBiondo-Wood and Haber (2001:111), in that in this design the researcher intended to describe the phenomenon accurately, within its specific context, on the basis of the collected data. The descriptive research design also assisted the researcher to achieve the research objective, i.e., describing the adolescents' knowledge with regard to the implications of pregnancy.

Lobiondo-Wood and Haber (2001:112) stress that researchers use this type of design to search for precise information about the characteristics of the research subjects, groups, institutions or situations or about the frequency of the occurrence of a phenomenon, particularly when little is known about the phenomenon.

The primary purpose of a descriptive study is to describe the situation, preferences, practices, opinions, concerns or interests of the phenomenon of interest (Burns & Grove 2005:232). Descriptive studies provide valuable baseline information. The method is also flexible and can be used to collect information from a large group of respondents (Brink 2006:111). In this study, structured interviews were conducted to elicit information on the knowledge female adolescents have about the implications of pregnancy.

3.4.4 Exploratory research design

Exploratory research design aims at investigating the full nature of a phenomenon, the manner of existence, other related factors and the characteristics of the subjects thereof, in order to gain additional information on the situation or practice. Exploratory research is done to increase the researcher's knowledge on the field of study and provides valuable baseline information for further investigation. The method uses interviews and observational methods to collect data (Brink 2006:120). The research design was exploratory as it examined the existing knowledge of female adolescents with regard to the consequences of pregnancy.

3.4.5 Non-experimental

LoBiondo-Wood and Haber (2001:111) state that the design of the non-experimental research is used in studies in which the researcher wishes to obtain real information about a phenomenon or explore events, people, or situations as these happen naturally. In non-experimental research, the independent variables have already occurred, and therefore the researcher cannot control them directly by manipulation, that is, the researcher explores only relations or differences.

Non-experimental research also requires a clear and concise problem statement which is based on a theoretical structure. The research design was non-experimental because only one group of persons, namely adolescent girls in the Bengo area, provided information for this study; they were not subjected to any variables and were not compared with other adolescents.

3.4.6 Contextual

According to Burns and Grove (2005:170), a contextual design provides a description within a unique setting. The context of this study was female adolescents at level II of basic education school. The natural setting for this study was a Level II school in the area Bairro da Açúcareira, Bengo province. The knowledge of female adolescents with regard to the implications of pregnancy cannot be isolated from its context and as such is dependent on the context and the time that the research occurred.

3.5 POPULATION AND SAMPLING METHOD

The population is the total number of people or elements that meets the specific set specifications of the study established by the researcher (Polit et al 2004:438). This is also known as the target population.

The criteria for inclusion or exclusion should be clearly stated. In this study, the target population was all the female adolescents between the ages of 13 and 16 years who were registered at and attended school during morning and afternoon sessions at school level II at the Açúcareira suburb in the Bengo province, Angola, the largest school in Caxito city within the Bengo province, with the most grades.

3.5.1 Inclusion criteria

Inclusion criteria are "the characteristics that the respondents must have in order to be included in the study" (Burns & Grove 2005:343). The respondents included in this study had to

- be female learners
- fall within the age group 13 to 19 years of age
- be registered learners and attend morning and afternoon sessions at the school
- have agreed to partake in the study and be willing to be interviewed by the researcher.

3.5.2 Exclusion criteria

Exclusion criteria are "the characteristics that the respondents lack in order not to be included in the study (Burns & Grove 2005:343). In this study respondents not willing to participate in the study, and female learners younger than 13 years and older than 19 years of age were excluded from the study.

3.6 SAMPLING METHOD

Sampling refers to the process of selecting a number of individuals from the delineated target population in such a way that the individuals in the sample represent as nearly as

possible the characteristics of the whole study population (LoBiondo-Wood & Haber 2001:142). The advantage of selecting a sample is that it is less costly and more time saving than collecting information from a large group of respondents. The selected sample should therefore have similar characteristics to the population under study to allow generalisability of the results to represent the population (Burns & Grove 2005:453).

There are two types of sampling, namely probability and non-probability sampling (Brink 2006:126). In this study both probability and non-probability sampling were used. The respondents were selected using probability sampling and the site was selected using non-probability sampling.

3.6.1 Probability sampling

Probability sampling technique is a process of selecting respondents that ensures that every member or element of the population has an equal chance of being selected into the study, prevents subjectivity bias, and allows the results to be generalised to the target population. The probability sampling method does not allow the researcher to intentionally exclude a certain portion of the population. To achieve this probability, the sample should be selected randomly (Brink 2006:126-131). Probability sampling was used to select the respondents.

3.6.1.1 Sampling of respondents

In this research a simple random sampling approach was used. The selection of the research sample was discussed with the statistician. The researcher identified 100 female adolescent learners at the stated school to participate in this study. A simple random sampling method was used to ensure that every respondent had an equal chance of being chosen.

Simple random samples are drawn using basic probability sampling techniques. Participants are drawn in a random way from the sampling frame. Each of the respondents is listed separately and therefore has an equal chance of being included in this study. The main features of a simple random sample are as indicated below (Polit et al 2004: 230):

- It involves a one-stage selection process.
- Each respondent has an equal and independent chance of being drawn.
- The study or accessible population can be identified and listed.

Using this technique, the researcher needed to follow certain steps:

- Define the population.
- Create a sample frame or structure.
- Calculate the sample size.
- Assign a consecutive identification number to each element in the sample frame.

Lists of all female adolescents learners registered in level II class for the morning and afternoon sessions, who effectively attend school, were requested from the school management. From this list every fifth name was selected (only female adolescent learners were selected), until a total of 100 respondents within the age group 13 to 19 years had been selected, irrespective of their level of schooling.

3.6.2 Non-probability sampling

Non-probability sampling is a process of selecting respondents into the study with less chances of obtaining a representative sample (Burns & Grove 2005:40). Non-probability sampling, by using the convenience sampling technique, was used to select the site for the study.

3.6.2.1 Convenience sampling

Convenience sampling, as defined by Brink (2006:132), is also known as "accidental" or "availability" sampling, and it involves the choice of readily available subjects or objects (sites) for the study. Convenience sampling was used to select the site for the study.

3.6.2.2 Sampling site

There are 15 high schools in Caxito city within the Bengo province. The researcher contacted the Provincial Education Delegate for Bengo province, who suggests the researcher uses the largest high school in Caxito city within the Bengo province. All the

schools were contacted and permission to undertake the research was sought. Only one school, which was a level II school in the area Bairro da Açúcareira, responded to the request. This school was thus conveniently chosen by the researcher, as it was "available" at the time of the study (Brink 2006:133).

3.6.2.3 Sample size

Burns and Grove (2005:354) state that there are no hard and fast rules about sample size, but a sample should have at least 30 respondents. According to Polit and Beck (2004:267-268), quantitative research designs require a large sample to increase representativity and reduce sample error. Because of the limited scope of this study a sample of 100 respondents was used. The female adolescent learners attending the level II school were a heterogeneous group as they came from different ethnic and socio-economic backgrounds, had different cultural norms and beliefs, and there was a difference in their ages.

3.7 RESEARCH SETTING

The research setting is the environment in which the study takes place; it can be a natural or controlled environment. Natural settings are study environments without any changes made for the purpose of the study (Burns & Grove 2005:325). The study was conducted in the Bengo province in Angola at a level II school.

The study was done in a natural setting, as there was no manipulation of the environment. Thus no changes were made to the clinic situation or special treatment given to the respondents which could have affected the results. The data were collected during a normal school day. Therefore, the learners stayed in the classroom but were taken aside for the interviews.

3.8 DATA COLLECTION

Data collection is a systematic process in which the researcher collects relevant information to achieve the research purpose and objectives. The instrument used to collect data depends on the research design (Burns & Grove 2005:421). In this study, data were collected using a structured interview schedule administered by the

researcher. An interview provides quality data on what people are doing or thinking about a phenomenon (Polit & Beck 2004:241).

3.8.1 Data collection instrument

A structured interview schedule was designed after the literature review and with the help of two supervisors and a statistician. In the interview schedule, the researcher asked open-ended and closed-ended questions to find out what the female adolescents knew and thought about the phenomenon under study.

The interview schedule allows objective data collection from the respondents and eliminates diversion from the topic. It prevents bias or subjective judgements on the part of the researcher. In addition, all the respondents were asked the same questions, which allowed objective comparison of results (Brink 2006:151).

The researcher designed an interview schedule that was free from bias and used the same structured questions for all the respondents to ensure consistency of responses. Questions were asked to elicit the knowledge of respondents on the implications of pregnancy. The interview schedule was divided into five sections:

- Section A required biographical information.
- Section B required information on demographic data.
- Section C enquired about their knowledge of sexual practices/habits.
- Section D enquired about their knowledge and perceptions about the consequences of pregnancy.
- Section E asked questions about their knowledge about the development of the sexual and reproductive system and safe sexuality (see annexure D).

3.8.2 Conducting the interviews

A structured interview is “a method in which information is collected through personal interaction with the respondents to obtain their views” (Brink 2006:153). In this study, the researcher visited the research site, interviewed the selected sample using the structured interview schedule, and documented the respondents’ responses in the same order and manner. This allowed the respondents to clarify questions where necessary.

When deciding on an interview schedule the researcher took into account the following advantages and disadvantages of the interview schedule.

3.8.2.1 Advantages of structured interviews

Interviews have the following advantages:

- Interviews are more feasible for most people; uneducated or illiterate people can all answer questions from an interviewer. Thus, responses can also be obtained from individuals who cannot read or write.
- The response rate for interviews is usually high as respondents are less likely to refuse to be interviewed if someone is available.
- An interview is a flexible method which allows the researcher to explore the deeper meanings of phenomena.
- Face-to-face interviews also produce information through personal observations of the respondents' verbal and non-verbal communication.
- The researcher can clarify ambiguous or confusing questions.
- The respondents are less likely to leave a question unanswered.
- The researcher controls the structured interview (Burns & Grove 2005:396-397).

3.8.2.2 Disadvantages of structured interviews

Interviews have the following disadvantages:

- Interviews are time consuming and costly, as the researcher has to travel to the respondents' venue and conduct the interview.
- The respondents may give the information that they think the researcher wants (Brink 2006:151-152; Burns & Grove 2005:397).
- The structured interview schedule with predetermined responses could make respondents give the information that the researcher wants, thus the respondents' give responses as specified by the researcher, not their own ideas. This constraint could be overcome by allowing the respondents to give any other response, apart from the responses provided in the interview schedule.

The collection of data was carried out once approval for the research project was obtained from the Ministries of Health and Education of the Bengo province. Later, the approval of the relevant school principal was requested.

Once authorisation from the various institutions had been obtained, the researcher organised a meeting with the teachers of the relevant school, to inform them about the objectives of the research, the methodology for the collection of data, and about the instrument for collection of data. A careful explanation of the issues mentioned on the structured interview schedule was given.

After this meeting, the principal of the school involved in the research convened a meeting for the parents/tutors of the students who had agreed to partake in the research. At this meeting between the researcher and the students and their parents, the researcher had the opportunity to inform them about the need for the study and established an environment of mutual trust and respect with all participants in the study. Before starting the research, parents and/or tutors as well as participating students signed the informed consent form (annexure C).

Participation was voluntary and anonymity was guaranteed. An undertaking was signed by the researcher to present the results of this study to the relevant school. Data collection took place during the morning and afternoon sessions at the school. In order facilitate the interviews, the learners remained in the classrooms. The researcher called out each selected respondent individually.

One hundred (100) structured questionnaires were used for interviews during the course of three days (between 13 and 16 July 2006), with an approximate duration of 20 minutes per respondent.

3.8.3 Pre-testing of instrument

Once the instrument was validated by experts in adolescent health from the Ministries of Health and Education, a pre-test was carried out to confirm whether the content of the questionnaire accurately reflected the essence of the concepts to be studied and whether the questions were appropriate to the knowledge of adolescents with regard to pregnancy.

A pre-test or pilot study is a small-scale trial of the data-collection instrument to determine clarity of questions and whether the instrument elicits the desired information (Polit & Beck 2004:296). In order to ensure reliability and validity, the interview schedule was pre-tested on five learners attending another level II school in the Bengo province (with similar attributes) to check the clarity of questions and identify vague or non-acceptable questions. Adjustments were made based on the outcome of the pre-test results. The data collected during the pre-test were not part of the study.

A pre-test is a trial run to determine whether the instrument is clearly worded and free from major biases and whether it elicits the type of information envisioned (Polit et al 2004:254). The only way to know whether the questions are understandable to the respondents is to pre-test them in a similar population, as cited by LoBiondo-Wood and Haber (2001:182).

The pre-test was carried out at another level II school of the province of Bengo, which has the same characteristics as the school selected to carry out the research. Once approval was obtained from the school principal, the questionnaire was applied to the adolescents who had not been identified as part of the group of participants in the research. In total, 10 adolescents within the same age group were asked to fill in the questionnaire, after an explanation had been provided by the researcher and informed consent had been obtained from the parents and the students.

After the pre-test, the researcher identified the need to make some changes to questions 7 and 16. This was done after permission from the supervisor and the statistician had been obtained.

3.9 VALIDITY AND RELIABILITY

Reliability is the degree of consistency with which the data-collection instrument produces the same results every time it is implemented in the same situation or used by different investigators. The data-collection instrument should be accurate and stable to reflect true scores of the attributes under investigation and minimise error (Brink 2006:160; Burns & Grove 2005:214; 376; LoBiondo-Wood & Haber 2001:192). To ensure reliability, the researcher pre-tested the interview schedule on female adolescent learners who were not part of the sample and attended a school with the

same attributes as the level II school in Bengo province. This was done to identify vague, unacceptable questions and consistency of results.

3.9.1 Validity

Validity is the extent of accuracy with which an instrument measures the construct it is supposed to measure in the context of the concepts/variables being studied (LoBiondo-Wood & Haber 2001:187-188). A structured interview schedule was developed after a review of relevant literature to incorporate and measure important variables in the study. The researcher and supervisors closely examined the questions in the interview schedule to ensure that they measured the desired variables. The face, content, and construct validity were also examined.

Face validity

Face validity refers to subjective judgment on whether the research instrument appears to measure what it is supposed to measure (Burns & Grove 2005:377-378). Face validity was maintained by constructing questions relevant to the study and the interview schedule was evaluated by two nurse educators, schoolteachers**,** two supervisors and a statistician to check the tool's appearance and consistency and whether the tool measured what it was supposed to measure. Changes were made according to the feedback from the statistician, the supervisors, nurse educators, research unit officer and schoolteachers who reviewed the interview schedule.

Construct validity

Construct validity ensures that abstract concepts are measured adequately and logically, and relationships between variables are identified, with an instrument based on theory and clear operational definitions. Construct validity includes the definition of variables in line with existing literature or theory, and differentiates between respondents who possess the trait and those without the trait (Burns & Grove 2005:217-218). In this study the interview schedule was based on the literature reviewed and the relevance to the variables in the study. The variables were operationally defined to create a common understanding between the researcher and readers.

Content validity

Content validity is tested by ensuring that all the components of the variables to be measured in a study are included in the interview schedule, without neglect of important components (LoBiondo-Wood & Haber 2001:187-188). To meet this criterion, the researcher reviewed relevant literature before developing the instrument and ensured that all the parts/necessary variables were included. The instrument was also given to two fellow nurse educators, the two supervisors, a statistician and two schoolteachers for comment. The questionnaire was then altered according to their evaluation.

3.9.2 Threats to internal and external validity

3.9.2.1 Internal validity

Internal validity is the extent to which the results of the study reflect reality rather than extraneous variables. Threats to internal validity are factors that may give false positives or false negatives in the measurement of variables. Lack of internal validity may be observed when other variables rather than the independent variables under study are responsible for part of or the entire observed outcome on the dependent variable. Therefore, the researcher has to be observant of other variables rather than the dependent variables that may affect the outcome of the results (Burns & Grove 2005:215-217). The researcher was observant of the following factors, which could give false or negative measurement of the variables in the study.

Setting

The study was conducted in a natural environment, i.e. a school, as it was intended to explore the knowledge of female adolescent learners on the phenomenon of interest, and the results of the study could not be altered.

Pre-testing

Burns and Grove (2005:257-258) state that information obtained on pre-test may improve the responses of respondents. In the study, respondents were interviewed on

separate dates, individually and in privacy to avoid other respondents overhearing, and information gained from the pre-test was not disclosed.

3.9.2.2 External validity

External validity deals with the ability to generalise the findings of the study to other members of the population rather than the sample (Burns & Grove 2005:218-219). The study has limited generalisability, owing to the sampling approach of respondents and a small sample size.

3.10 ETHICAL CONSIDERATIONS

Van der Wal, in Pera and Van Tonder (2005:147) who referred to Ashcroft (2002:278) define ethics in research: "There is no doubt about the fact that research is an ethically significant activity, and any research project must be pursued in an ethically reflective manner. "

It is crucial that all researchers are aware of research ethics. Ethics relate to two groups of people: those conducting the research, who should be aware of their obligations and responsibilities, and the "researched upon", who have basic rights that should be protected. The study therefore had to be conducted with fairness and justice by eliminating all potential risks. The respondents must be aware of their rights. Ethical issues observed in a study may include (Van der Wal in Pera & Van Tonder (2005:150):

- permission to conduct the study
- informed consent
- right to anonymity and confidentiality
- right to privacy
- justice
- beneficence
- respect for people

3.10.1 Permission to conduct the study

The researcher sought and obtained permission to conduct the study from the Research and Ethics Committee of the Department of Health Studies, Unisa (annexure E); the Ministries of Health and Education of the Bengo province; and the Management of the school where the research took place (see annexures A and B).

3.10.2 Informed consent

LoBiondo-Wood and Haber (2001:161) state that informed consent is the legal principle which, at least in theory, governs the capability of the respondent to accept or refuse partaking in a study without undue induction, nor any forceful element, subterfuges, deceit, coercion or other types of submission or coercion. Furthermore, LoBiondo-Wood and Haber (2001:161) point out that no researcher may involve a human being as a research subject before obtaining his or her effective legal informed consent or that of his or her legal representative.

With regard to this study, once approval had been obtained from the provincial authorities of Bengo, the researcher met the research subjects and explained the objectives of the study, the methodology of data collection and the required participation by the respondents. They were informed, in writing, that their participation was voluntary and that they could withdraw their participation in the study at any time, without fear of being penalised by the researcher or by the institution.

The respondents were asked to sign a written consent form to indicate their willingness to participate in the study (see annexure C). This consent form was kept separate from the interview schedule so that it could not be used to identify the respondents. The respondents were also informed that data would be reported in a dissertation that would be available in the library of the University of South Africa.

3.10.3 Anonymity

Anonymity is based on the principle of respect and is ensured when the identity of the research subject is not linked, even by the researcher, to her individual reactions (LoBiondo-Wood & Haber 2001:163). The anonymity of an individual or of an institution

is protected by making it impossible to link or relate aspects to a person or a specific individual. Confidentiality and anonymity were guaranteed by ensuring that the data obtained would be used only by the researcher, who knows the source of those data. Anonymity is guaranteed by the researcher because the instrument for collection of data does not request the name of the research subject, i.e. it is anonymous.

As requested by the institution where the research took place, as well as by the parents/tutors of the research participants, the results of the research will be communicated to the institution with a view to enabling the implementation of the programme on sexual education, should the study ascertain that it is needed.

3.10.4 Confidentiality

LoBiondo-Wood and Haber (2001:163) state that confidentiality means that no information provided by the participants will be disclosed or made available to any third parties. Confidentiality means that the individual identities of the research subjects cannot be linked to the information provided by them and will not be divulged publicly. The respondents were informed that the information would be used for this research and should they require any information, this would be made available to them. The interview schedules were kept in a safe place.

3.10.5 Self-respect

The respondent's rights to maintain self-respect and dignity were observed through protection from physical and psychological risks during the study. No participant could benefit from participation in the study, nor be harmed by refusal to participate (Polit et al 2004:254).

3.10.6 Benefits

The respondents were informed that they would receive no monetary benefits from participating in the study. The research findings could benefit the institutions in terms of providing inputs for improving the quality of guidance provided to adolescents (Van der Wal in Pera & Van Tonder 2005:147-148).

3.11 DATA ANALYSIS

Data analysis is the systematic organisation and synthesis of the research data (Polit et al 2004:311). It also entails categorising, ordering, manipulating, and summarising the data and describing them in meaningful terms (LoBiondo-Wood & Haber 2001:253).

The data were analysed using an SPSS Version 13.0 computer program by a statistician at Unisa Computer Department. Descriptive and inferential statistics, such as frequency tables, percentages and correlation tests, were used in the data analysis and summaries. Simple tests of association were also used to identify relationships between variables, including frequencies. Simple test of association were also used to identify relationships between variables including frequencies, chi-square to compare means and t-test.

3.11.1 Chi-square test (X^2)

The Chi-square test (X^2) examines the relationships between two variables at nominal and discrete level in qualitative or quantitative research. The test compares the actual frequencies with the expected outcomes or how closely they match or differ from the expected distribution and whether two variables are independent or not. In this study, most of the questions were 'yes' or 'no' (nominal) and discrete hence the use of this test and frequency tables in interpretation of data (Burns & Grove 2001:454). The Chi-square test (X^2) is used to test statistical relationships between two discrete variables using a set of frequencies. Therefore, Chi-Square tests (X^2) were performed using SPSS using commands: Analyze→ Nonparametric tests → Chi-square test (X^2); while for the relationships, the commands were analyze,→ descriptive statistics → cross tabs. A Chi-square test (X^2) was done between parental abandonment versus age and parental abandonment versus grade of school.

3.11.2 T-test

A t-test is a statistical examination of samples to compare the difference of means between two groups of variables with the known standard. In t-test the means of a sample is compared with the standard deviation mean. The calculation of a t-test needs average of sample (means), population average/mean, standard deviation of sample

and number of observations and should only be used once to test the hypothesis. However, Bonferoni t-test can be used several times to test a variety of relationships between variables. The bigger the difference between means, the higher the significance (Burns & Grove 2001:581). The computer program calculated the t-test with a p value, which indicates the probability of occurrence and can be presented as: ($t = 34.7$, $t = 31.85$; $p = 0.0005$) with a difference of means of 73.8 and 56.7.

The findings are discussed and data presented in the form of tables and graphs in chapter 4.

3.12 SUMMARY

This chapter discussed the research design and methodology used in the study. A quantitative, descriptive, exploratory design was used to investigate the research objectives and questions. A structured interview schedule was used to elicit data from female adolescents on the phenomenon of interest. Chapter 4 describes the data analysis and interpretation.

Chapter 4

Analysis and interpretation of data

4.1 INTRODUCTION

This chapter presents the data analysis and interpretation of the study. One hundred female respondents from a public school in the province of Bengo in Angola, between the ages of 13 to 19 years, participated in the study in 2006. A statistician analysed the data, using the Statistical Package for Social Sciences (SPSS) version 13.0. Descriptive and inferential statistics such as frequencies, tables and percentages were used in the data analysis and summaries. A few statistically significant relationships between biographical information and attitudes/knowledge about sexual matters were highlighted through cross-tabulation. Relationships between variables were identified using frequencies, Chi-square and t-tests.

The purpose of the study was to explore the knowledge that female adolescents in the Bengo province of Angola have about the implications of early pregnancy.

The objectives of the study were to

- analyse the knowledge of female adolescents in the Bengo province of Angola about the implications of early pregnancy
- recommend guidelines on health education programmes for adolescents to schools and health professionals

The researcher collected data from female respondents using a structured interview schedule. After signing the consent forms indicating their willingness to participate in the study, the respondents were interviewed. The consent form was folded and put into a separate box from the anonymously completed interview schedules to ensure anonymity. In this way no signed consent form could be linked to any specific completed interview schedule.

A total of one hundred female adolescents were interviewed at a public school in the province of Bengo, Angola between June and July 2006.

The structured interview schedules comprised five sections:

- Section A: Biographical data
- Section B: Demographic Data
- Section C: Sexual practices/habits
- Section D: Perceptions about the consequences of pregnancy
- Section E: Knowledge about the development of sexual and reproductive system and safe sexuality (see annexure D).

4.1.1 Data presentation

The following explanation of the data analysis process was provided by the statistician. Summary statistics used for the responses to each individual question are frequencies, i.e. counts of how many respondents selected a particular response. These frequencies are illustrated by means of pie charts or bar charts and tables. Bar charts are particularly useful in the case of a question that offered a number of alternatives and where the respondents were allowed to mark more than one choice (the 'Yes/No' options), where the bar chart compares the frequencies of the different choices. The pie chart is used in cases where the respondents are allowed to choose only one alternative, and the pie chart then illustrates the share of the total respondents opting for each choice.

In items where not all the respondents responded, the frequency and percentages were calculated according to the number responses (valid percentage). Missing responses were thus not included.

In some instances, the percentage adds up to a decimal larger than 100,0%. This calculation was rounded to a 100,0%.

The information is presented in tables, pie charts and bar charts. As the frequency of the 100 respondents equals the percentage of 100, only the frequency is indicated in the tables, while only the percentage is utilised in the different types of graphs.

4.2 SECTION A: BIOGRAPHICAL DATA

This section of the interview schedule covered the biographical data such as age, years of school attendance and school grade in which the respondent currently was.

4.2.1 Respondents' ages (item 1)

The respondents were asked how old they currently were. The respondents' ages fell within the age defined as an adolescent (11–19 years). Of the respondents, 27,0% (n=27) were older than 17 years; 21,0% (n=21) were 16 years; 20,0% (n=20) were 15 years; 13,0% (n=13) were 14 years old; 11,0% (n=11) were 13 years old and 8,0% (n=8) were 17 years of age. Figure 4.1 depicts the respondents' ages.

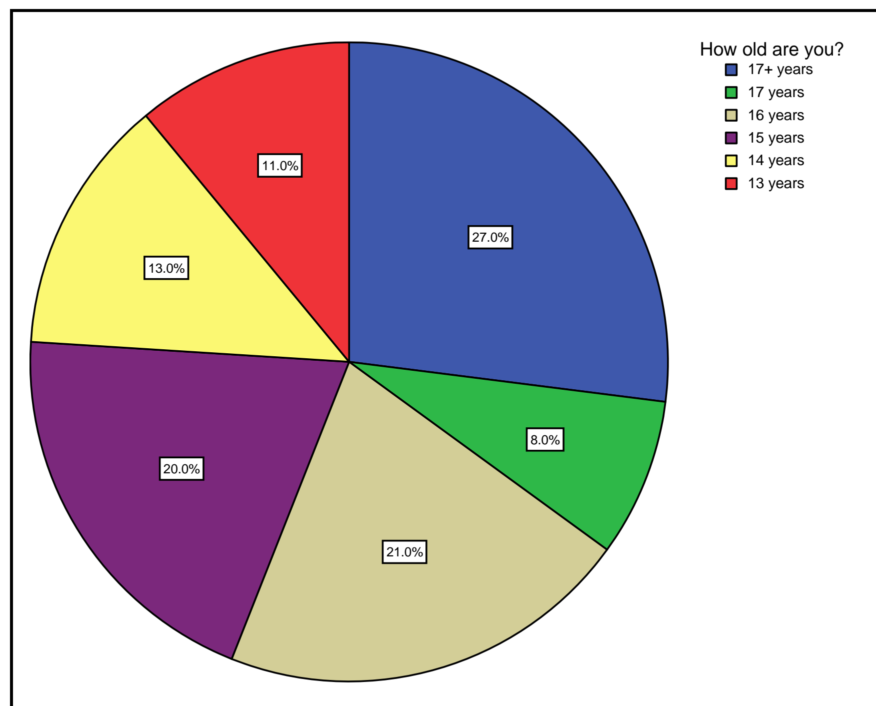

Figure 4.1

Ages of respondents (N=100)

4.2.2 Number of years attending school (item 2)

The respondents were asked to indicate the number of years they had attended school. Of the respondents 49,05% (n=49) had attended school for 8 years or more; 22,0% (n=22) respondents had attended school for 7 years; 13,0% (n=13) had attended school for 6 years and 16,0% (n=16) had 5 years or less of school attendance (see Figure 4.2).

Generally a high level of education is associated with a better understanding of the information and practices related to health. Thus, a high level would probably enable respondents to understand the severity of the risks involved in an early pregnancy, and possibly assist them to choose safe and appropriate life orientation skills so as to avoid early pregnancies.

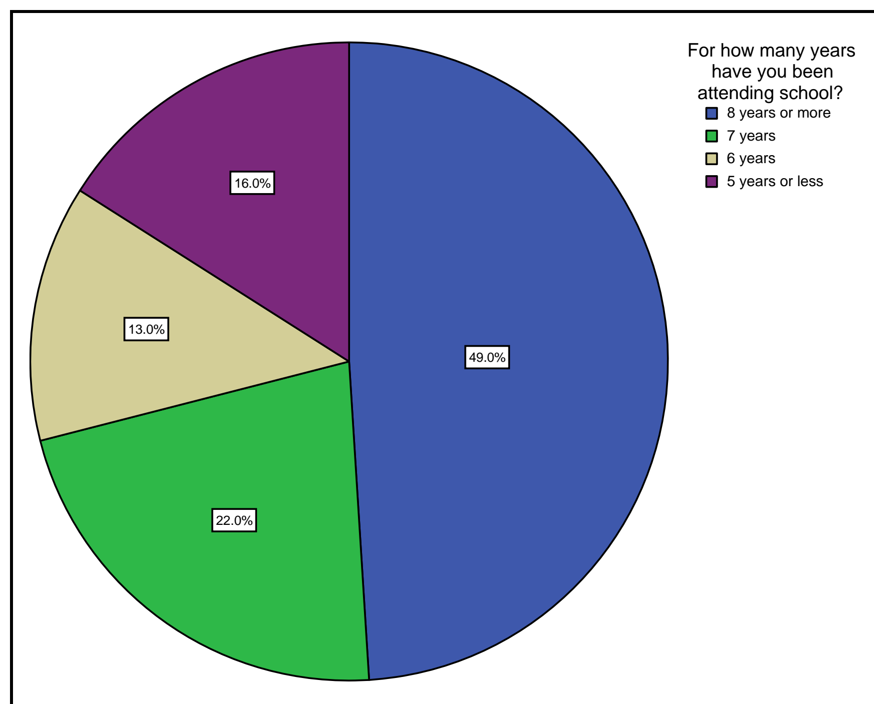

Figure 4.2

Number of years of school attendance (N=100)

4.2.3 Present school grade (item 3)

In this item the respondents were asked to indicate the school grade they were currently in. Table 4.1 represents this school grade. Of the respondents 34,0% (n=34) were in the 5th grade or lower; 23,0% (n=23) were in the 7th grade; 22,0% (n=22) were in the 8th grade or higher and 21,0% (n=21) in the 6th grade. Although the majority of the respondents, i.e., 34,0%, were in the 5th grade or lower, they should be able to read and understand health information on the risks of early pregnancy.

Table 4.1 Present school grade (N=100)

School grade	Frequency	Percentage	Valid percentage
8th grade or higher	22	22,0	22,0
7th grade	23	23,0	23,0
6th grade	21	21,0	21,0
5th grade or below	34	34,0	34,0
Total	**100**	**100,0**	**100,0**

4.3 SECTION B: DEMOGRAPHIC DATA

4.3.1 Ethnic linguistic group (item 4)

Of the respondents 60,0% (n=60) belonged to the Kimbundo ethnic tribe; 26,0% (n=26) of the respondents were part of the Umbondo ethnic group; 3,0% (n=3) were members of the Ganguela ethnic group; 4,0% (n=4) of the respondents were members of the Kuanhama ethnic group and 7,0% (n=7) belonged to other ethnic groups, such as Bacongo.

Table 4.2 Ethnic linguistic group (N=100)

Ethnic group	Frequency	Percentage	Valid Percentage
Kimbundo	60	60,0	60,0
Umbundo	26	26,0	26,0
Ganguela	3	3,0	3,0
Kuanhama	4	4,0	4,0
Other	7	7,0	7,0
Total	**100**	**100,0**	**100,0**

4.3.2 Religious affiliation (item 5)

Of the respondents 54,0% (n=54) were Catholic, 12,0% (n=12) were Pentecostal; 7,0% were Jehovah's Witnesses and Protestant respectively; 5,0% (n=5) belonged to the Evangelical religion; 5,0% belonged to the Reino de Deus religion; 8,0% were members from other religions such as: 4,0% (n=4) Bom Deus; 2,0% (n=2); Methodist 2,0% (n=2); Universal; while 2,0% (n=2) of the respondents indicated that they had no religious affiliation. Of the 100 respondents the majority (54,0%) were from the Catholic religion, which could be of importance for the study, as the Catholic religion has strict principles and policies with regard to premarital sex and sex education.

Table 4.3 Religious affiliation (N=100)

Religious affiliation	Frequency	Percentage	Valid percentage
Catholic	54	54,0	54,0
Protestant	7	7,0	7,0
Evangelical	5	5,0	5,0
Reino de Deus	5	5,0	5,0
Pentecostal	12	12,0	12,0
Jehovah Witness	7	7,0	7,0
Other religion	8	8,0	8,0
No religion	2	2,0	2,0
Total	**100**	**100,0**	**100,0**

4.4 SECTION C: SEXUAL PRACTICES/HABITS

4.4.1 Age of first menstruation (item 6)

Of the respondents 32,0% (n=32) indicated that their first menstruation started at the age of 13 years; 21,0% started their first menstruation at 14 years of age; 19,0% had their first menstruation at 12 years of age; 15,0% said that their first menstruation commenced at the age of 15 years; 8,0% indicated that their first menstruation started after the age of 16 years and 2,0% indicated that their first menstruation commenced at the age of 11 years.

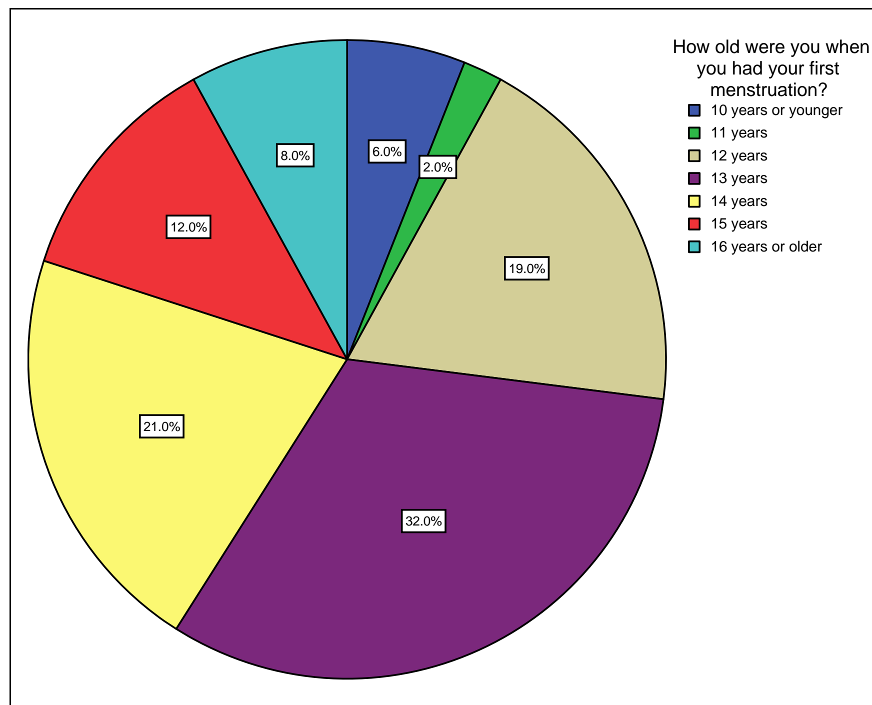

Figure 4.3

Age of first menstruation (N=100)

4.4.2 Age at first sexual encounter (item 7)

This question was asked to identify whether or not the respondents had received sex education prior to their sexual debut. Of the respondents 34,0% (n=34) indicated never having had any type of sexual involvement; 19,0% (n=19) had sexual intercourse for the first time at 14 years of age; 18,0% (n=18) at 15 years of age; 14,0% (n=14) at 16 years of age or older; 7,0% (n=7) at 13 years of age; 4,0% (n=4) at 12 years of age; 2,0% (n=2) at 11 years of age; and 2,0% (n=2) indicated having had sexual intercourse for the first time at 10 years of age or younger.

Table 4.4 Age at first sexual encounter (N=100)

Age at first sexual encounter	Frequency	Percentage	Valid Percentage
10 years or younger	2	2,0	2,0
11 years	2	2,0	2,0
12 years	4	4,0	4,0
13 years	7	7,0	7,0
14 years	19	19,0	19,0
15 years	18	18,0	18,0
16 years or older	14	14,0	14,0
Never had sex	34	34,0	34,0
Total	100	100,0	100,0

Knowing the age at which respondents had their first sexual encounters should indicate before what age sex education as well as contraceptive information should be provided. This is important to enable adolescent girls to make informed decisions prior to embarking on sexual intercourse. Learning about contraceptives only after becoming pregnant might deprive many young women of the opportunity to make informed decisions about their own and their children's futures.

4.4.3 Method of contraception used (item 8)

Of the respondents 50,0% (n=50) indicated using the condom as a method to prevent pregnancy; 4,0% (n=4) indicated using foam; 3,0% (n=3) indicated using Femidon; 2,0% (n=2) said they used the pill; 2,0% (n=2) indicated other methods such as introducing aspirin in the vagina: chloroquine and Santa Maria respectively.

Table 4.5 Method of contraception used (N=62)

Method		Number of respondents
8.1	Condom	50
8.2	Pill	2
8.3	Injection	0
8.4	Femidon	3
8.5	Diaphragm	0
8.6	Foam	4
8.7	None	1
8.8	Other	2

4.5 SECTION D: PERCEPTIONS ABOUT THE CONSEQUENCES OF PREGNANCY

4.5.1 Earliest age to fall pregnant (item 9)

The answers varied in terms of the various possibilities.

Of the respondents 56,0% (n=56) indicated there was a higher risk of falling pregnant at 13 years of age or younger; 10,0% (n=10) said at 14 years; 9,0% (n=9) indicated there was a higher risk at 15 years of age; 6,0% (n=6) indicated at 18 years; 4,0% (n=4) at 17 years; 2,0% (n=2) at 19 years and 2,0% (n=2) at 16 years of age.

Table 4.6 Earliest age to fall pregnant (N=94)

Age		Number of respondents
9.1	20 years	5
9.2	19 years	2
9.3	18 years	6
9.4	17 years	4
9.5	16 years	2
9.6	15 years	9
9.7	14 years	10
9.8	13 years and younger	56

4.5.2 Youngest age you are prepared to fall pregnant (item 10)

The majority of respondents 64,0% (n=64) chose category 20 years and older; 16,0% (n=16) indicated they would feel prepared to fall pregnant at 19 years of age; 9,0% (n=9) would feel prepared at 18 years of age; 5,0% (n=5) at 17 years of age; 3,0% (n=3) at 15 years; 2,0% (n=2) at 16 years; 1,0% (n=1) at 14 years.

Table 4.7 Youngest age you are prepared to fall pregnant (N=100)

Age		Number of respondents
10.1	20 years or older	64
10.2	19 years	16
10.3	18 years	9
10.4	17 years	5
10.5	16 years	2
10.6	15 years	3
10.7	14 years	1
10.8	13 years or less	0

4.5.3 What health problems can be expected if you were to fall pregnant (item 11)

The majority of respondents replied “I don’t know” to all health problems that they could anticipate should they fall pregnant; 80,0% (n=80) don’t know whether they would feel depressed; 63,0% (n=63) don’t know whether they would risk a miscarriage or a premature labour; 41,0% (n=41) don’t know if they could become infected with STIs/HIV.

Table 4.8 Health problems expected if you were to fall pregnant (N=100)

Problems	No	Don't know	Yes
11.1 High blood pressure	21	61	18
11.2 Miscarriage	20	63	17
11.3 Premature labour	19	63	18
11.4 STI/HIV infection	18	41	41
11.5 Depression	17	80	3
11.6 Caesarean section	16	38	46
11.7 Anaemia	34	63	3
11.8 Other	1	98	1

4.5.4 If pregnant, how would it affect your life plan (item 12)

The most frequent answer was "I would have to start working", by 76,0% (n=76); 42,0% (n=42) indicated they would have to stop studying; 35,0% (n=35) said they would not have a qualified profession; 13,0% (n=13) indicated they would stay at home doing nothing.

Table 4.9 If pregnant, how would it affect your life plan (N=100)

Effect	Number of respondents
12.1 I would stop studying	42
12.2 I would have to work	76
12.3 I would not have a qualified profession	35
12.4 I would stay at home doing nothing	13
12.5 Other	0

4.5.5 Health problems of your baby (item 13)

In all cases the most common answer was "I don't know" with regard to health problems that the baby could have.

Table 4.10 Health problems of your baby (N=100)

Problem	No	Don't know	Yes
13.1 Low birth weight	16	61	23
13.2 Respiratory problems	11	79	10
13.3 High accessibility of death	15	77	8
13.4 HIV infection	14	45	41
13.5 Other	0	100	0

4.5.6 Social/family problems an adolescent could experience during pregnancy (item 14)

It seems that lack of money to support the baby would to be the main problem with 81,0% (n=81); 40,0% (n=40) indicated their parents would abandon them; 38,0% (n=38) indicated the child's father would not assume responsibility for the pregnancy; 22,0% (n=22) said they would feel ashamed to socialise with their peers; 16,0% (n=16) indicated their friends would abandon them.

Table 4.11 Social/family problems an adolescent could experience during pregnancy (N=100)

Problems		Number of respondents
14.1	Lack of money to support the baby	81
14.2	My parents would abandon me	40
14.3	My friends would abandon me	16
14.4	I would be ashamed to socialise with my colleagues	22
14.5	The child's father would not assume responsibility for the pregnancy	38
14.6	Other	0

4.5.7 What would you do if you were to fall pregnant now? (item 15)

Having a talk with the mother and with the family seem to be the most prevalent option with 56,0% (n=56) and 55,0% (n=55) respectively; 27,0% (n=27) of the respondents indicated they would have an abortion; 25,0% (n=25) indicated they would talk to a friend; 21,0% (n=21) would have a talk with the father; 7,0% (n=7) indicated they would kill themselves; and 2,0% (n=2) indicated they would give the baby to be brought up by someone else.

Table 4.12 What would you do if you were to fall pregnant now? (N=100)

Action		Number of respondents
15.1	I would have an abortion	27
15.2	I would have a talk with my mother	56
15.3	I would have a talk with my father	21
15.4	I would have a talk with my family	55
15.5	I would talk to a friend	25
15.6	I would kill myself	7
15.7	I would have the baby and then abandon it	0
15.8	I would give the baby to be brought up by someone else	2
15.9	Other	0

4.6 SECTION E: KNOWLEDGE ABOUT THE DEVELOPMENT OF THE SEXUAL AND REPRODUCTIVE SYSTEM AND SAFE SEXUALITY

4.6.1 Knowledge of age at which sexual and reproductive system develops (item 16)

The majority of respondents 94,0% (n=94) stated they knew at which age the sexual and reproductive system develops, and 6,0% (n=6) stated they did not know at what age the sexual and reproductive system develops.

Table 4.13 Knowledge of age at which sexual and reproductive system develops (N=100)

	Frequency	Percentage	Valid Percentage
Yes	94	94,0	94,0
No	6	6,0	6,0
Total	100	100,0	100,0

4.6.2 Sexual development (item 17)

Of the 91 respondents, 13,2% (n=12) indicated that the development of the breasts starts between 10-11 years of age.

Of the 93 respondents, 44,3% (n=44) indicated that growth of pubic hair starts between 12 and 13 years of age; 26,9% (n=25) indicated that growth of pubic hair starts between

10 and 11 years of age; 5,4% (n=5) indicated that the growth of pubic hair starts between 17 and 18 years of age; 2,2% (n=2) indicated between 16 and 17 years of age.

Table 4.14 Sexual development (N=100)

Sexual development	10-11 years	12-13 years	14-15 years	16-17 years	17-18 years
17.1 Growth of pubic hair	25	44	17	2	5
17.2 Development of breasts	12	49	24	6	0
17.3 First menstruation	11	37	46	0	0
17.4 Enlargement of hips	6	36	45	8	0

4.6.3 Self-protection with regard to falling pregnant (item 18)

Condoms seem to be the most used method, by 77,0% (n=77); 30,0% (n=30) indicated not having sexual intercourse; 20,0% (n=20) indicated the use of Femidon; 17,0% (n=17) indicated using a contraceptive method and 34,0% (n=34) of respondents reported that they used other contraceptive methods to protect themselves from falling pregnant.

Table 4.15 Self-protection with regard to falling pregnant (N=100)

Method used	Number of respondents
18.1 Use a condom	77
18.2 By not having sexual intercourse	30
18.3 I use a contraceptive method	17
18.4 I use Femidon	20
18.5 I use other methods	34

4.6.4 Reasons for adolescents falling pregnant (item 19)

The majority of respondents, 86,0% (n=86), indicated the lack of access to clinics/family planning services; 75,0% (n=75) indicated the lack of entertainment; 73,0% (n=73) indicated the lack of knowledge about sexual desires; 67,0% (n=67) indicated the lack of knowledge about the cause of pregnancy; 62,0% (n=62) indicated other reasons; 31,0% (n=31) indicated the lack of attention to adolescents; only 1,0% (n=1) indicated having lost her whole family during the war.

Table 4.16 Reasons for adolescents falling pregnant (N=100)

Reason		Number of respondents
19.1	Lack of entertainment	75
19.2	Lack of information about sexual desires	73
19.3	Lack of knowledge about the cause of pregnancy	67
19.4	Lack of clarity and attention to adolescents	31
19.5	No access to family planning clinics/services	86
19.6	Rejection at family planning consultations	13
19.7	In my family everyone falls pregnant early	14
19.8	I need somebody to care for	4
19.9	Lost whole family during the war	1
19.10	Other reasons	62

4.6.5 More knowledge about sexual matters (item 20)

The majority of respondents, 93,0% (n=93), indicated more knowledge was required on how to prevent pregnancy; 84,0% (n=84) indicated knowledge on sexual and reproductive development; 76,0% (n=76) indicated knowledge on how to negotiate with the sexual partner; 73,0% (n=73) indicated on how to practise safe sex; and 66,0% (n=66) indicated “Other”.

Table 4.17 More knowledge about sexual matters (N=100)

Knowledge required		Number of respondents
20.1	Sexual and reproductive development	84
20.2	How to practise safe sex	73
20.3	How to prevent pregnancy	93
20.4	How to negotiate with sexual partner	76
20.5	How to prevent STI/HIV infection	0
20.6	Other	66

4.6.6 Persons who should inform adolescents about sexual matters (item 21)

Table 17 shows that the majority of respondents, 83,0% (n=83), indicated that their teachers should instruct them about sexual matters; 73,0% (n=73) indicated their parents; 34,0% (n=34) indicated nurses and 1,0% (n=1) indicated friends who should inform them about sexual matters.

Table 4.18 Persons who should inform adolescents about sexual matters (N=100)

People	Number of respondents
21.1 Teachers	83
21.2 Parents	73
21.3 Nurses	34
21.4 Friends	1
21.5 Other	0

4.7 PART 2: CROSS-TABULATION

In this section a few statistically significant relationships between biographical information and attitudes/knowledge about sexual matters are highlighted.

1 *Parental abandonment* versus *age*

The cross-tabulation is as follows:

Cross tab					
			How old are you?		Total
			16 years or older	15 years or younger	
My parents would abandon me	Yes	Count	15	25	40
		% within How old are you?	26,8%	56,8%	40,0%
	No	Count	41	19	60
		% within How old are you?	73,2%	43,2%	60,0%
Total		Count	56	44	100
		% within How old are you?	100,0%	100,0%	100,0%

The cross-tabulation shows that 56,8% of the younger respondents (15 years or younger) feared that their parents would abandon them if they were to fall pregnant, but only 26,8% of the older respondents (16 years and older) had that fear.

This difference is statistically significant at the 5,0% level of significance, since the significance value in the table below (0.004) is less than 0.05.

Chi-Square Tests	
	Significance
Fisher's Exact Test	.004

The following bar chart illustrates this.

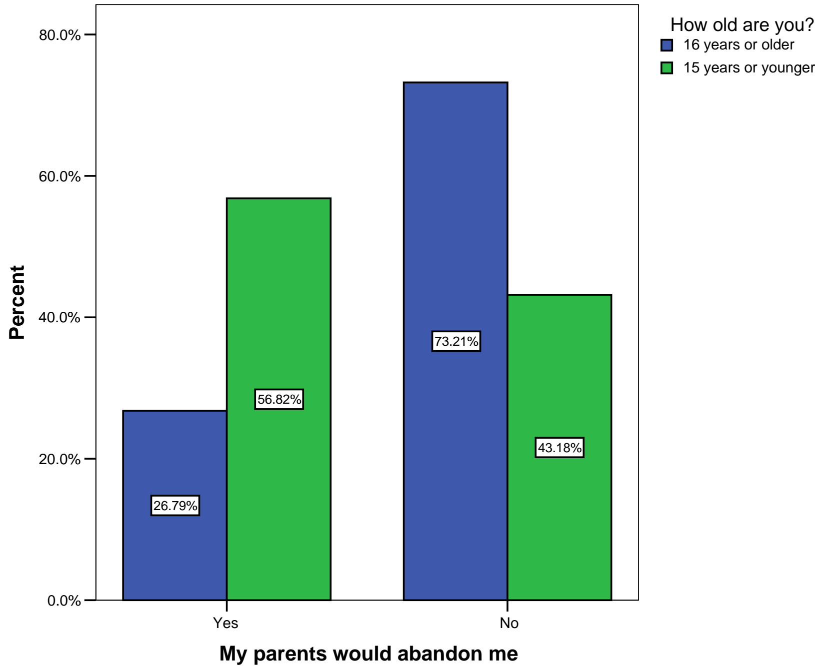

Figure 4.4
Parental abandonment versus age

2 *Parental abandonment* versus *grade of school*

The cross-tabulation is as follows:

Cross tab					
			In what grade are you?		**Total**
			Grade 7 and higher	**Grade 6 and lower**	
My parents would abandon me	**Yes**	**Count**	13	27	40
		% within In what grade are you?	28,9%	49,1%	40,0%
	No	**Count**	32	28	60
		% within In what grade are you?	71,1%	50,9%	60,0%
Total		**Count**	45	55	100
		% within In what grade are you?	100,0%	100,0%	100,0%

The cross-tabulation shows that 49,1% of the respondents in the lower grades (grade 6 and lower) feared that their parents would abandon them if they were to fall pregnant,

but only 28,9% of the respondents in the higher grades (grade 7 and higher) had that fear.

This difference is statistically significant at the 5.0% level of significance, since the significance value in the table below (0.044) is less than 0.05.

Chi-Square Tests	
	Significance
Fisher's Exact Test	.044

The bar chart illustrates this.

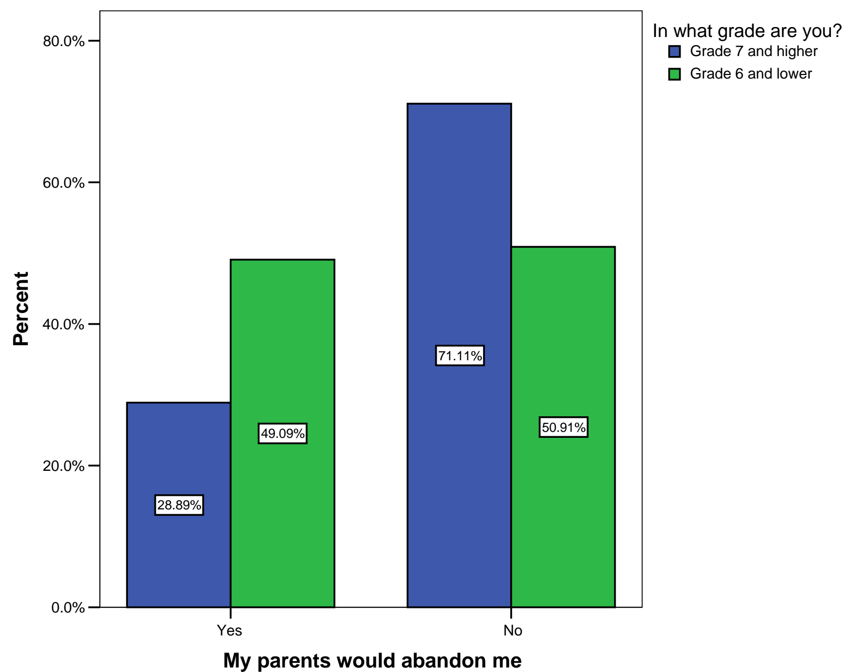

Figure 4.5

Parental abandonment versus grade at school

3 Knowing *age of sexual development* versus *age of respondents*

The cross-tabulation is as follows:

Cross tab						
			How old are you?		**Total**
			16 years or older	**15 years or younger**	
Do you know at what age the sexual and reproductive system develops?	**Yes**	**Count**	56	38	94
		% within How old are you?	100,0%	86,4%	94,0%
	No	**Count**	0	6	6
		% within How old are you?	0,0%	13,6%	6,0%
Total		**Count**	56	44	100
		% within How old are you?	100,0%	100,0%	100,0%

The table shows that 86,4% of the younger respondents (15 years or younger) said they knew at what age the sexual reproductive system develops, and 100,0% of the older respondents (16 years and older) said they knew this.

This difference is statistically significant at the 5% level of significance, since the significance value in the table below (0.006) is less than 0.05.

Chi-Square Tests	
	Significance
Fisher's Exact Test	.006

The bar chart illustrates this.

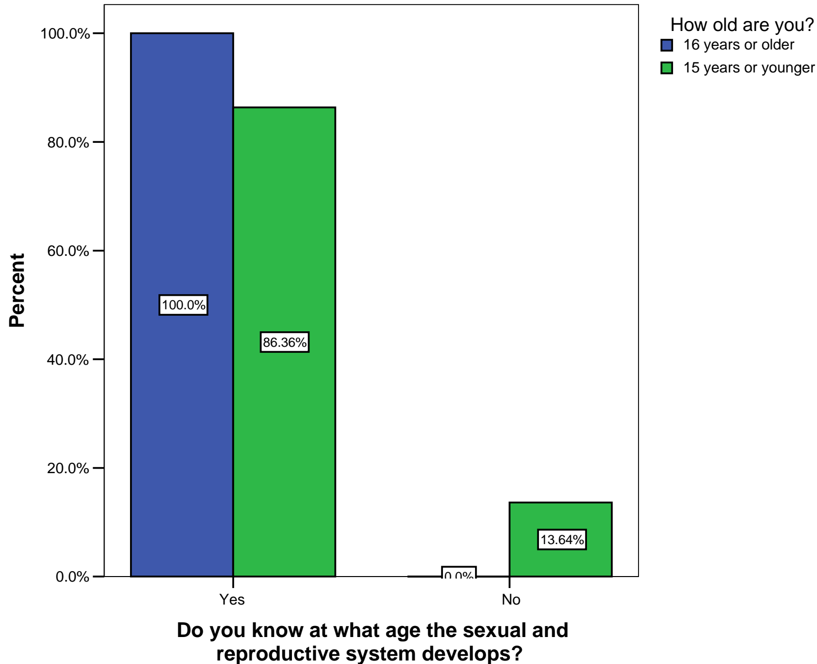

Figure 4.6

Knowing age of sexual development versus age of respondents

4 *Knowing age of sexual development* versus *years of schooling*

The cross-tabulation is as follows:

Cross tab					
			Years of School		**Total**
			8 years or more	**7 years or less**	
Do you know at what age the sexual and reproductive system develops?	**Yes**	**Count**	49	45	94
		% within Years of School	100,0%	88,2%	94,0%
	No	**Count**	0	6	6
		% within Years of School	,0%	11,8%	6,0%
Total		**Count**	49	51	100
		% within Years of School	100,0%	100,0%	100,0%

The table shows that 88,2% of the respondents who had been in school for 7 years or less said they knew at what age the sexual reproductive system develops, and 100% of the respondents who had been to school for 8 years or more said they knew this.

This difference is statistically significant at the 5,0% level of significance, since the significance value in the table below (0.027) is less than 0.05.

Chi-Square Tests	
	Significance
Fisher's Exact Test	.027

The bar chart illustrates this.

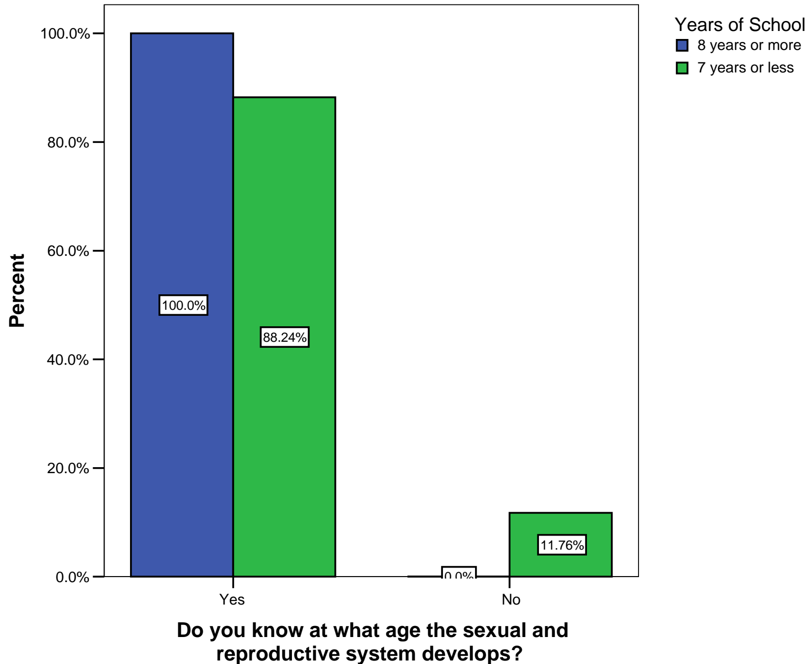

Figure 4.7

Knowing age of sexual development versus years of schooling

5 *Need to know how to prevent pregnancy* versus *grade in school*

The cross-tabulation is as follows:

Cross tab					
			In what grade are you?		**Total**
			Grade 7 and higher	**Grade 6 and lower**	
How to prevent pregnancy	**Yes**	**Count**	39	54	93
		% within In what grade are you?	86,7%	98,2%	93,0%
	No	**Count**	6	1	7
		% within In what grade are you?	13,3%	1,8%	7,0%
Total		**Count**	45	55	100
		% within In what grade are you?	100,0%	100,0%	100,0%

So 98,2% of the respondents in the lower grades (grade 6 and lower) wanted to be informed about how to prevent pregnancy, and 86,7% of the respondents in the higher grades (grade 7 and higher) wanted to be given such information.

This difference is statistically significant at the 5,0% level of significance, since the significance value in the table below (0.043) is less than 0.05

Chi-Square Tests	
	Significance
Fisher's Exact Test	.043

The bar chart illustrates this.

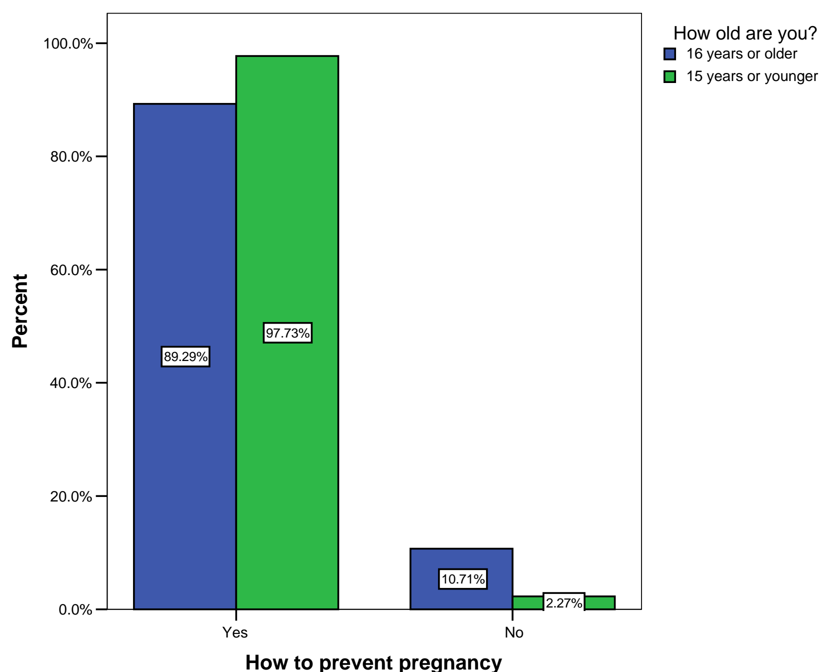

Figure 4.8

Need to know how to prevent pregnancy versus grade in school

6 *Need to know how to prevent pregnancy* versus *ethnic/linguistic group*

The cross-tabulation is as follows:

Cross tab					
			Ethnic/Linguistic group		**Total**
			Kimbundo	**Other**	
How to prevent pregnancy	**Yes**	**Count**	53	40	93
		% within ethnic/linguistic group	88,3%	100,0%	93,0%
	No	**Count**	7	0	7
		% within ethnic/linguistic group	11,7%	0,0%	7,0%
Total		**Count**	60	40	100
		% within ethnic/linguistic group	100,0%	100,0%	100,0%

The table shows that 88,3% of the respondents who belong to the Kimbundo group wanted to be informed about how to prevent pregnancy, and 100,0% of the respondents in the other groups wanted to be given such information.

This difference is statistically significant at the 5,0% level of significance, since the significance value in the table below (0.040) is less than 0.05.

Chi-Square Tests	
	Significance
Fisher's Exact Test	.040

The bar chart illustrates this.

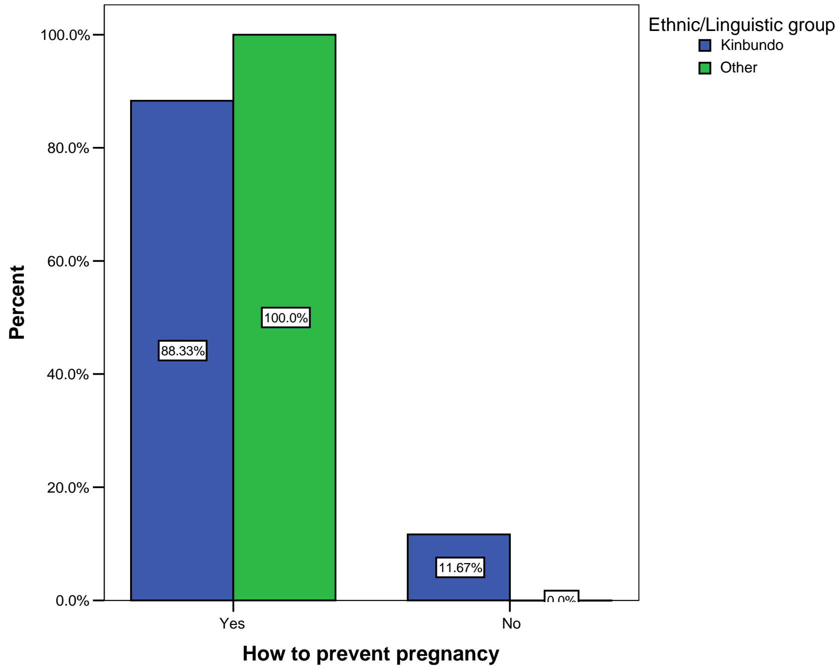

Figure 4.9

Need to know how to prevent pregnancy versus ethnic/linguistic group

7 *Information from parents* versus *religious group*

Cross tab					
			Religious group		**Total**
			Catholic	**Other**	
Parents	**Yes**	**Count**	33	40	73
		% within religious group	61,1%	87,0%	73,0%
	No	**Count**	21	6	27
		% within religious group	38,9%	13,0%	27,0%
Total		**Count**	54	46	100
		% within religious group	100.0%	100,0%	100,0%

The cross-tabulation shows that 61,1% of the respondents who belonged to the Catholic faith wanted to be informed about sexual matters by their parents, and 87% of the respondents in the in the other religious groups wanted to be given such information by their parents.

This difference is statistically significant at the 5% level of significance, since the significance value in the table below (0.006) is less than 0.05.

Chi-Square Tests	
	Exact Sig. (2-sided)
Fisher's Exact Test	.006

The bar chart illustrates this.

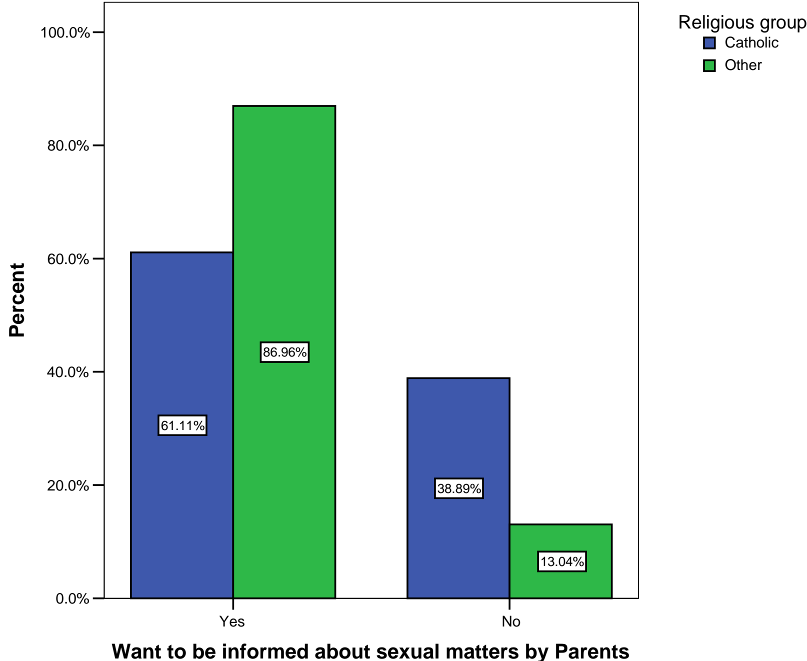

Figure 4.10

Information from parents versus religious group

4.8 CONCLUSION

This chapter discussed the data analysis and interpretation, with the use of graphs, frequency tables, descriptions and inferential statistics.

Chapter 5 concludes the findings of the study, discusses its limitations and makes recommendations for practice and further research.

Chapter 5

Results, conclusions, limitations and recommendations

5.1 INTRODUCTION

The prolonged war in Angola, during the approximately 30 years since the struggle for independence, is one of the main factors determining the poverty in the country. The negative impact created by the war on the lives and freedom of people, one which affects more intensely children and adolescents, is indisputable.

Such a situation of need can determine the adoption of risk behaviours such as prostitution, which has unquestionably been on the increase. In the same way, gender differences, characterised by the lack of power of the woman in decision taking and in the management of her own reproductive and sexual life, have determined vulnerability of women in general and of female adolescents in particular, resulting in undesired pregnancies and infection by STDs, including HIV/AIDS.

Promoting favourable behaviour in terms of sexual and reproductive health through the implementation of educational programmes is an act of primary importance and one which must involve multi-sectoral teams, as this is a problem of public health.

For this reason, the researcher was motivated to study the knowledge of female adolescents about the implications of pregnancy. The study took place in the Bengo Province, which lies some 60 km from the Luanda province.

This chapter discusses the conclusions, with reference to the objectives and findings and limitations of the study, and makes recommendations for practice and further research.

5.2 AIM AND OBJECTIVES OF THE STUDY

The aim and objectives of the study were as follows:

The aim of the study was to identify and describe the knowledge that female adolescents in the Bengo Province have about the implications of pregnancy.

5.2.1 Objectives

The following objectives were set for the study:

- Analyse the knowledge of female adolescents in the Bengo province of Angola about the implications of pregnancy
- Recommend guidelines on health education programmes for adolescents for schools and health professionals

5.3 RESULTS

The conclusions, based on the analysis of the data obtained from 100 structured face-to-face interviews with female adolescents at a school in the Bengo District in Angola, will be presented according to the objectives guiding the study.

5.3.1 Section A: Biographic data

The biographic data explored in the study included age and school attendance, which might influence female adolescents' knowledge of pregnancy.

The majority of the respondents (27,0%), were 17 years old or older; 49,0% had attended school for 8 years or more; 34,0% were in grade 5 or below. Only 27,0% of the respondents were 17 years old and had an average number years of schooling; thus some of the respondents were literate and could read and understand health education programmes and literature with regard to the implications of early or unwanted pregnancy.

5.3.2 Section B: Demographic data

The demographic data explored in the study included ethnic linguistic group and religious affiliation.

Of the respondents, 60,0% belonged to the Kimbundo language ethnic group and 54,0% followed the Catholic religion. According to Andrews and Boyle (2003:466), the Catholic religion has principles related to reproduction: the first being birth control: the basic principle is that the conjugal act should be one that is love-giving and potentially life-giving. Only natural means of contraception, such as abstinence, the temperature method, and ovulation method are acceptable; secondly, with regard to abortion, direct abortion is always morally wrong. The Roman Catholic Church teaches the sanctity of all human life, even of the unborn, from the time of conception. Furthermore, in the case of indigenous ethnic groups, there are often rigid beliefs, practices and values with regard to sexuality and sexual behaviour. A study conducted with different ethnic groups in Brazil, for instance, found a widespread practice of anal intercourse, both between men and men and between men and women. Among adolescents too, anal intercourse is common, mainly in order to avoid both unwanted pregnancy and rupture of the hymen – still an important sign of a young women's sexual purity.

5.3.3 Section C: Sexual practices/habits

Of the respondents, 32,0% reported that they had their first menstruation at 13 years of age; 34,0% had never had any sexual relationship; 50,0% made use of the condom during sexual intercourse.

The fact that half of the respondents make use of the condom as a contraceptive method shows that they have received some information with regard to prevention of pregnancy, but the fact that they are engaging in sexual activities while at school is of concern.

According to Helman (2007:160), patterns of sexual behaviour are important in the transmission of several diseases. Where promiscuity is common within a society, there is a greater likelihood of the spread of sexually transmitted diseases, such as gonorrhoea, syphilis and HIV.

5.3.4 Section D: Perceptions on the consequences of pregnancy

In this section the answers varied in terms of the various possibilities of the answer, thus:

Of the respondents, 56,0% considered it a risk to fall pregnant at 13 years of age, 64,0% considered themselves prepared to fall pregnant at 20 years of age or older; 98,0% answered they did not know what health problems they could anticipate should they fall pregnant now; 100,0% answered "I don't know" to the health problems that the baby could have; 81,0% saw not having money to support the baby as a problem; 56,0% would talk to their mothers should they fall pregnant now.

Fraser et al (2006:22) report that South Africa has a very high rate of teenage pregnancy. The average age of the mother is about 18 years. Many teenage mothers show a risk of developing complications such as hypertensive disorders and intra-partum complications. It should be furthermore recognised that mortality and morbidity amongst babies born to those mothers is increased. For many young teenage mothers pregnancy and motherhood mean an early conclusion to their education, with consequently reduced career opportunities and increased likelihood that they will find themselves socially excluded and living in poverty.

5.3.5 Section E: Knowledge on the development of the sexual and reproductive systems and safe sexuality

The majority of the respondents (94,0%) knew at what age the sexual and reproductive systems develop; 77,0% stated that the condom is the best-known method of preventing pregnancy; 86,0% considered that the lack of access to a family planning clinic/services is the reason for adolescent pregnancies; 93,0% would like to obtain more information on how to prevent a pregnancy; 83,0% say that teachers are the people who should give information on sexuality.

5.3 CONCLUSIONS

Based on the results obtained the following conclusions for the study were drawn:

5.4.1 Section A: Biographic data

It was ascertained that adolescents who should have finished their intermediary schooling at 17 years of age or older are still at a level II school.

The majority of the respondents have been attending school for 8 years or more, which presupposes a high rate of failure or late entry into school. The majority of the respondents were in grade 5 or below, which reinforces the supposition indicated in the previous paragraph.

5.4.2 Section B: Demographic data

In the study it was ascertained that the majority of the respondents belong to the Kimbundo ethnic language group, which corresponds to the geographic locality (north) of the Bengo Province.

The majority of the respondents follow the Catholic religion, which corresponds to the reality of the country in which 38,0% follow the Catholic religion.

5.4.3 Section C: Sexual practices/habits

The majority of respondents had their first menstruation at 13 years of age, within the normal parameters for the appearance of the first menstruation.

The majority of the respondents indicated never having had any type of sexual relationship; however, the majority indicated making use of condoms during sexual intercourse. This illuminates a contradiction in the data given, which suggests that the respondents were at times not entirely truthful.

5.4.4 Section D: Perception about the consequences of pregnancy

The majority considered it a risk to fall pregnant at 13 years of age and considered that they would be ready for pregnancy at 20 years of age or older, which demonstrates in a way that there is some awareness of the risk of falling pregnant too early.

With regard to the health problems for the woman and the newborn, the majority do not know the implications of pregnancy; this apparently meets the objectives of this study.

Most of the respondents indicated that the most severe social implication for early pregnancy was the lack of money to support the baby.

With regard to the family member that they would inform should they fall pregnant now, most claimed that this would be the mother, which demonstrates the existence of a more open relationship with the mothers, for the girl to be able to trust her mother to handle this type of situation.

5.4.5 Section E: Knowledge on the development of the sexual and reproductive systems and safe sexuality

The majority of the respondents knew at what age the sexual and reproductive systems develop, which is a positive point.

The majority of the respondents refer to the condom as the method most used for preventing pregnancy, which is extremely positive as besides preventing pregnancy it also prevents STDs, especially during adolescence, in which sexual relations are in the majority of the cases occasional.

The majority of the respondents refer to the lack of access to a family planning clinic. The majority would like to obtain more information on how to prevent pregnancy and indicate that the teachers are the preferred persons to communicate this knowledge.

From the results obtained it can be concluded that the objectives set out for the study were attained.

5.4 RECOMMENDATIONS

Based on the findings, the researcher makes the following recommendations for improving the knowledge of adolescent girls with regard to pregnancy, especially early pregnancy:

5.4.1 Improved knowledge of early/unwanted pregnancy for adolescent girls

- Educational programmes should be launched in all the schools and communities on life skills for adolescents. These programmes should commence during primary school, preferably with scholars aged 10. The topics to be included in these programmes could include: menstruation, sexual intercourse, sexuality and the consequences of pregnancy in adolescence; gender role expectations, communication and contraception.
- A strategy for involving parents in sex education should be developed. This will help them to develop a sense of confidence and responsibility within family structures with regard to sex education.
- During the development of the educational programmes, factors such as the practices, beliefs and values of the culture of the target group should be taken into consideration.
- Improving and establishing recreational facilities for different sports in both urban and rural areas where leisure time could be spent is very important for adolescents. This may prevent them from engaging in sexual activities.
- A programme on HIV/AIDS should be developed for school teachers and school children, which would include the value of abstinence, human and children's rights, moral regeneration and gender equality.
- The educational programmes should have a separate girls' and boys' division which would conduct school and district-based peer education workshops on learner pregnancy and values in education.

5.4.2 Health care policies

- This study should be presented to the authorities of the Ministry of Education and the Ministry of Health of the Bengo Province with regard to the development and teaching of life-skills educational programmes for adolescents. The programmes should be developed with both ministries involved. There should be programmes developed for the scholars, teachers, nurses and communities.
- Specific policies should guide the teachers and nurses about issues such as menstruation, sexual intercourse, pregnancy, contraception, and HIV/AIDS transmission. They need to maintain a non-judgmental attitude towards sexually active adolescents and facilitating adolescents' access to contraceptives, if the

issue of adolescents' knowledge of pregnancy is successfully to be addressed in the Bengo area.

- This report should be presented to the adolescents who partook in the study, as well as their teachers, parents and tutors.

5.4.3 Media

- Media, such as radio and television programmes, journals and pamphlets should be developed and distributed in conjunction with the departments of Education and Health of the Bengo province.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

It is suggested that further research should be conducted on the following topics:

- An investigation into the Implications of pregnancy in adolescents between the ages of 13 and 19 in the Bengo province
- A survey of the perceptions of parents and tutors on pregnancy in adolescence
- An investigation into the perceptions of adolescents (male adolescents) between the ages of 13 and 19 about pregnancy in adolescence
- An assessment of adolescents' adherence to family planning
- An investigation into the adolescents' knowledge of their legal right to exercise their choice concerning contraception.
- An investigation into the long-term psychological and emotional implications of pregnancy and birth for the adolescent
- A survey of the beliefs, practices and values of the Kimbundo ethnic group with regard to pre-marital sex, contraception and pregnancy
- An investigation into school discipline, gangsters, alcohol and drug abuse and poor school attendance
- Research into pregnancy-related school drop-outs.

5.6 LIMITATIONS OF THE STUDY

The following limitations which could limit the generalisability of the research results were identified:

- The study was conducted through the medium of distance education. All the communication was through an interpreter, which complicated communication and made the physical absence of the supervisor more difficult
- The fact that references, statistics and sources were scarce and out of date, which led the researcher to consult the Internet more
- To date, no literature is available on the knowledge of the implications of pregnancy in female adolescents in Angola, thus the researcher had no data with which to compare the results.
- Only female adolescents in a school in the Bengo province of Angola participated in this study. Consequently, the results might not be generalisable to adolescent girls in another school or province.
- Mainly Kimbundo-speaking adolescent girls participated in the study, which implies that the results might not be generalisable to adolescent girls with other home languages

Despite these limitations, this study attempted to identify the knowledge female adolescents have with regard to the implications of pregnancy while still at school. The findings and recommendations should be viewed against these limitations.

5.7 CONCLUSION

The 100 adolescents who participated in his research required more information about contraceptives, life-skills and particularly sexual matters. This was the major reason for their ignorance about the implications of pregnancy while still at school. The findings of this study appear to confirm those reported by Bodibe (1994), who found that 157 school children in the Republic of South Africa (RSA) had only moderate levels of sexual knowledge, but that no cause and effect relationships could be identified between sexual knowledge, attitudes and behaviour. However, teachers and nurses can play a major role in educating Angolan adolescents about their right to make sexual choices and make informed decisions about sexuality.

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REPÚBLICA DE ANGOLA
GOVERNO DA PROVÍNCIA DO BENGO
DIRECÇÃO PROVINCIAL DA EDUCAÇÃO

AUTORIZAÇÃO

A Direcção Provincial da Educação do Bengo, tem a honra de informar que a senhora Maria da Conceição Martins da Silva, está autorizada a realizar trabalhos de Pesquisa em Matéria de conhecimentos dos adolescentes sobre as indicações da gravidez, com os adolescentes e alunos das escolas do IIº e IIIº níveis da Província.

E para que não lhe ponham impedimento, mandei passar a presente Autorização que vai por mim assinada e autenticada com o carimbo a óleo em uso nesta Direcção.

DIRECÇÃO PROVINCIAL DA EDUCAÇÃO DO BENGO EM CAXITO, AOS 06 DE JUNHO DE 2006.-

O DIRECTOR INTERINO

NOGUEIRA HERNANI

Handwritten note:
Given the nature of the request, permission is herewith granted.
Municipal Market of Asa Branca. 20 July 2006
Signed) Illegible
The Administrator of the Market

(LOGO OF THE UNIVERSITY AGOSTINHO NETO)

REPUBLIC OF ANGOLA

UNIVERSITY AGOSTINHO NETO

HIGHER INSTITUTE FOR NURSING

The Provincial Director of
Education for the
Province of Bengo
Att.: Mr. Nogueira Hernani

OFFICIAL LETTER No. 68/GD/IISE/2006

Re: Request to collect data

Our most cordial greetings.

We herewith would like to request your permission to conduct research in that Province, in one of the level II schools to be indicated by your Excellency, for a Master's Dissertation Project on the topic "Knowledge of adolescents about the implications of pregnancy."

Attached please find the informed consent form, the instrument for collection of data and authorization from the Research Ethics Committee.

I am confident that you will grant this matter your best understanding and attention.

Yours truly,

Luanda, 9 June 2005

The Researcher
Signed)
Maria da Conceição Martins da Silva

Handwritten note:
Given the nature of the request, permission is herewith granted.
Municipal Market of Asa Branca. 20 July 2006
Signed) Illegible
The Administrator of the Market

(LOGO OF THE REPUBLIC OF ANGOLA)

REPUBLIC OF ANGOLA
)VERNMENT OF THE PROVINCE OF BENGO

OVINCIAL DIRECTORATE FOR EDUCATION

AUTHORIZATION

The Provincial Directorate for Education of Bengo has the honour of informing that Mrs. Maria da Conceição Martins da Silva is authorized to carry out Research on the topic of knowledge of adolescents on the indications of pregnancy [*translator's note: as per the student's letter of request – this should have read* implications of pregnancy] amongst adolescents and learners from Levels II and III schools of the province.

And in order to prevent any difficulties or obstacles in that regard I have issued this Authorization which I have signed and authenticated with the oil stamp in use at this Institution.

PROVINCIAL DIRECTORATE OF EDUCATION OF BENGO IN CAXITO, ON 6 JUNE 2006.

Signed) The Interim Director
NOGUEIRA HERNANI

Consentimento de Participação em Pesquisa

Eu, abaixo-assinado**, ………………………………………………….,**
Concordo pelo presente documento a:

- Participar no estudo de pesquisa sobre o (tópico)
Conhecimento das adolescentes sobre as implicações da gravidez.”

- preencher o questionário relevante;

- autorizar o pesquisador a utilizar, a sua discrição, os dados por mim proporcionados no referido questionário, para fins de elaboração do relatório do pesquisador sobre a pesquisa realizada

Afirmo também ser o meu entendimento que

- Posso, em qualquer altura, terminar o meu envolvimento nesta pesquisa ou rescindir o meu consentimento para participar na mesma.
- a informação por mim providenciada até a altura em que rescindir a minha participação nesta pesquisa pode, no entanto, continuar a ser utilizada pelo pesquisador;
- o pesquisador manterá sempre, rigorosa confidencialidade e que a identidade do participante não será nunca ligada a informação providenciada;
- não receberei qualquer recompensa ou compensação financeira pela informação aqui providenciada ou pelo meu envolvimento neste projecto;
- tenho a opção de me recusar a responder a (quaisquer) pergunta (s) caso considere que esta (s) constitua/constituam violação da minha própria privacidade;
- ao assinar o presente consentimento de participação comprometo-me a responder honestamente a todas as perguntas razoáveis e a não

providenciar informação errónea ou de qualquer outra forma induzir, propositadamente, em erro o pesquisador;

- ser-me-á providenciada uma copia original deste consentimento de participação após a minha assinatura do mesmo.

Declaro pelo presente que o pesquisador

- me explicou em detalhes o objectivo deste projecto de pesquisa
- me informou e explicou-me o conteúdo deste consentimento de participação
- me esclareceu sobre a implicação da assinatura deste consentimento de participação

Ao co-assinar este consentimento de participação, o pesquisador compromete-se a

- manter confidencialidade e privacidade relativamente à identidade do participante e à informação proporcionada pelo participante na pesquisa
- organizar, antecipadamente, um local e hora apropriada para a realização da minha participação neste projecto
- a guardar em seguro o duplicado do presente consentimento de participação.

Assinado em--, aos----------------de---------------------2006

--	---
Assinatura do Participante	Assinatura do Pesquisador

Assinatura do Pai/ Mãe/ Encarregado de Educação

Consent to Partake in Research

I, the undersigned, ……………………..……………………..………………………..
herewith agree to:

- partake in the research on the (topic)
  Knowledge of female adolescents on the implications of pregnancy;

- fill in the relevant questionnaire

- authorize the researcher, to use, at her discretion, the data that I have provided in the questionnaire, for purposes of writing the researcher's report on the research that was carried out.

Furthermore I also state that it is my understanding that

- I may, at any time, discontinue my involvement in this research or withdraw my consent to partake in this research;

- the information that I have provided until such time as I withdraw my participation in this research can, however, still be used by the researcher;

- the researcher will, at all times, maintain strict confidentiality and that the identity of the participant will never be linked to the information provided;

- I will not receive any financial reward or payment for the information herewith provided or for my involvement in this project;

- I have the option to refuse to answer (any) question(s) should I feel that this/these question(s) constitute a violation of my own privacy;

- when signing this consent form to partake in the research I undertake to answer in an honest manner to all reasonable questions and not to provide any false information or in any other way purposely mislead the researcher

- I will be provided with a signed original copy of this consent form

I herewith declare that the researcher

- has explained to me the objective of this research
- has informed and explained to me the content of this consent to partake in the research
- has elucidated me on the implications of signing this consent to partake in the research

By co-signing this consent to partake in the research, the researcher undertakes to

- maintain confidential and private the identity of the participant and the information provided in the research
- organized, beforehand, an appropriate venue and time for me to partake in this project
- to keep in a safe place the duplicate of this consent to partake in the research

Signed in …………….. on ………… 2006.

....	Signed) illegible
PARTICIPANT'S Signature	RESEARCHER'S Signature

Signature of Father/Mother/Legal Guardian

QUESTIONNAIRE
THE KNOWLEDGE OF ADOLESCENTS REGARDING PREGNANCY

1	2	3

NUMBER OF QUESTIONNAIRE

1 OBJECTIVES

- To gather information on the knowledge of adolescents with regards to pregnancy and on the basis of the results
- To make recommendations for adolescent health education focussed on sexuality and pregnancy.

2 ETHICAL CONSIDERATION

All the information herewith provided will be treated confidentially. It is not necessary to indicate your name on the questionnaire.

3 INSTRUCTIONS

3.1 Please answer all the questions.
3.2 Answer the questions by providing an "X" in the box corresponding to the chosen alternative.
3.3 Please answer all questions as honestly, frankly and objectively as possible.
3.4 Answer according to your own personal opinion and experience.
3.5 Please return the questionnaire by 20 May 2006.

Answer the questions by placing an "X" in the box corresponding to the alternative which is applicable to you or write down your response in the space provided.

			FOR OFFICE USE ONLY	
SECTION A: BIOGRAPHICAL DATA				
1	**How old are you?**			
		ANSWER		
1.1	More than 17 years	1		
1.2	17 years	2		
1.3	16 years	3		
1.4	15 years	4		
1.5	14 years	5		
1.6	13 years	6		4
2	**For how many years have you been attending school?**			
	Years attending school	**ANSWER**		
2.1	8 years or more	1		
2.2	7 years	2		
2.3	6 years	3		
2.4	5 years or less	4		5

			FOR OFFICE USE ONLY	
3	**What school grade are you presently attending?**			
	School grade	**ANSWER**		
3.1	8th grade or higher	1		
3.2	7th grade	2		
3.3	6th grade	3		
3.4	5th grade or lower	4		6

SECTION B: DEMOGRAPHIC DATA

4	**To what ethnic linguistic group do you belong?**			
	Language group	**ANSWER**		
4.1	Kinbundo	1		
4.2	Umbundo	2		
4.3	Ganguela	3		
4.4	Kuanhama	4		
4.5	Other (please specify)	5		7
5	**What is your religion?**			
	Church attended	**ANSWER**		
5.1	Catholic	1		
5.2	Protestant	2		
5.3	Evangelical	3		
5.4	Reino de Deus (Kingdom of God)	4		
5.5	Pentecostal	5		
5.6	Jehovah's Witness	6		
5.7	Other (please specify)	7		
5.8	No religion	8		8

SECTION C: SEXUAL PRACTICES/HABITS

6	**How old were you when you had your first menstruation?**			
	Age of first menstruation	**ANSWER**		
6.1	10 years or younger	1		
6.2	11 years	2		
6.3	12 years	3		
6.4	13 years	4		
6.5	14 years	5		
6.6	15 years	6		
6.7	16 years or older	8		9
7	**How old were you when you had sexual intercourse for the first time?**			
	Age of first sexual intercourse	**ANSWER**		
7.1	10 years or younger	1		
7.2	11 years	2		
7.3	12 years	3		
7.4	13 years	4		
7.5	14 years	5		
7.6	15 years	6		
7.7	16 years or older	7		
7.8	Never had sexual intercourse	8		10

				FOR OFFICE USE ONLY	
8	**Do you use any method of contraception?**				
	Contraceptive method	**YES**	**NO**		
8.1	Condom	1	2		11
8.2	Pill	1	2		12
8.3	Injection	1	2		13
8.4	Femidon	1	2		14
8.5	Diaphragm	1	2		15
8.6	Foam	1	2		16
8.7	None	1	2		17
8.8	Other (please specify)	1	2		18

SECTION D: PERCEPTION ABOUT THE CONSEQUENCES OF PREGNANCY

9	**In your opinion, what is the earliest age you would consider it a risk to fall pregnant?**				
	Age	**YES**	**NO**		
9.1	20 years	1	2		19
9.2	19 years	1	2		20
9.3	18 years	1	2		21
9.4	17 years	1	2		22
9.5	16 years	1	2		23
9.6	15 years	1	2		24
9.7	14 years	1	2		25
9.8	13 years and younger	1	2		26

10	**In your opinion, what is the youngest age you are prepared to fall pregnant?**			
	Age to fall pregnant	**ANSWER**		
10.1	20 years or older	1		
10.2	19 years	2		
10.3	18 years	3		
10.4	17 years	4		
10.5	16 years	5		
10.6	15 years	6		
10.7	14 years	7		
10.8	13 years or younger	8		27

11	**What health problems could you expect if you had to fall pregnant now?**					
	Expected health problems	**NO**	**DON'T KNOW**	**YES**		
		1	**2**	**3**		
11.1	High blood pressure					28
11.2	Miscarriage					29
11.3	Premature labour					30
11.4	STI/HIV infection					31
11.5	Depression					32
11.6	Caesarean section					33
11.7	Anaemia					34
Other (please specify)						35

						FOR OFFICE USE ONLY
12	**Should you fall pregnant now how would it affect your life plan?**					
	Life plans		**YES**	**NO**		
12.1	I would stop studying		1	2		36
12.2	I would have to work		1	2		37
12.3	I would not have a qualified profession		1	2		38
12.4	I would stay at home doing nothing		1	2		39
12.5	Other (please specify)		1	2		40
13	**What health problems could your baby have?**					
	Expected problems for the baby	**NO**	**DON'T KNOW**	**YES**		
		1	**2**	**3**		
13.1	Low birth weight					41
13.2	Respiratory problems					42
13.3	High accessibility of death					43
13.4	HIV infection					44
13.5	Other (please specify)					45
14	**What social/family problems could a pregnancy during adolescence bring about?**					
	Expected social problems		**YES**	**NO**		
14.1	Lack of money to support the baby		1	2		46
14.2	My parents would abandon me		1	2		47
14.3	My friends would abandon me		1	2		48
14.4	I would be ashamed to socialise with my colleagues		1	2		49
14.5	The child's father would not assume responsibility for the pregnancy		1	2		50
14.6	Other (please specify)		1	2		51
15	**What would you do if you had to fall pregnant now?**					
	What you would do		**YES**	**NO**		
15.1	I would have an abortion		1	2		52
15.2	I would have a talk with my mother		1	2		53
15.3	I would have a talk with my father		1	2		54
15.4	I would have a talk with my family		1	2		55
15.5	I would talk to a friend		1	2		56
15.6	I would kill myself		1	2		57
15.7	I would have the baby and then abandon it		1	2		58
15.8	I would give the baby to be brought up by someone else		1	2		59
15.9	Other (please specify)		1	2		60

SECTION E: KNOWLEDGE ABOUT THE DEVLEOPMENT OF THE SEXUAL AND REPRODUCTIVE SYSTEM AND SAFE SEXUALITY								
16	**Do you know at what age the sexual and reproductive system develops?**				**YES**	**NO**		
					1	2		61
17	**If your answer is YES to question 16, continue with question 17.**							
	Sexual development	**10-11 years**	**12-13 years**	**14-15 years**	**16-17 years**	**17-18 years**		
		1	**2**	**3**	**4**	**5**		62
17.1	Growth of pubic hair							63
17.2	Development of breasts							64
17.3	First menstruation							65
17.4	Enlargement of hips							66

18	**Do you know how to protect yourself so you don't fall pregnant?**				
	Protection used	**YES**	**NO**		
18.1	Use a condom	1	2		67
18.2	By not having sexual intercourse	1	2		68
18.3	I use a contraceptive method	1	2		69
18.4	I use femidon	1	2		70
18.5	I use other methods such as	1	2		71
19	**Why do adolescents fall pregnant?**				
	Reasons for adolescent pregnancies	**YES**	**NO**		
19.1	Lack of entertainment	1	2		72
19.2	Lack of information about sexual desires	1	2		73
19.3	Lack of knowledge about the cause of pregnancy	1	2		74
19.4	Lack of clarify to attend to adolescents	1	2		75
19.5	No access to family planning clinics/services	1	2		76
19.6	Rejection at family planning consultations	1	2		77
19.7	In my family everyone falls pregnant early	1	2		78
19.8	I need somebody to care for	1	2		79
19.9	Lost whole family during the war	1	2		80
19.10	Other reasons (please specify)	1	2		81
20	**I would like to have more knowledge about sexuality**				
	Required knowledge	**YES**	**NO**		
20.1	Sexual and reproductive development	1	2		82
20.2	How to practice safe sex	1	2		83
20.3	How to prevent pregnancy	1	2		84
20.4	How to negotiate with sexual partner	1	2		85
20.5	How to prevent STI/HIV infection	1	2		86
20.6	Other (please specify)	1	2		87
21	**Who are the people who should inform you about sexuality?**				
	People	**YES**	**NO**		
21.1	Teachers	1	2		88
21.2	Parents	1	2		89
21.3	Nurses	1	2		90
21.4	Friends	1	2		91
21.5	Other (please specify)	1	2		92

Thank you for your assistance in completing this questionnaire