

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

AN ASSESSMENT OF THE STATUS OF POPULATION AND FAMILY
LIFE EDUCATION IN THE CURRICULUM OF SOME SELECTED
COLLEGES OF TEACHERS EDUCATION IN ETHIOPIA AND ITS
EFFECT UPON THE KNOWLEDGE, ATTITUDE, AND PRACTICE OF
THE STUDENTS

BISRAT ASHEBO



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In Education

BY
BISRAT ASHEBO
JUNE, 1997

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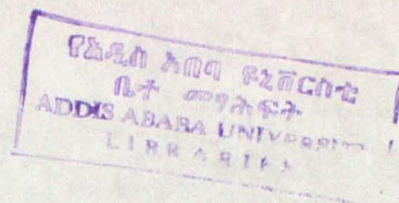
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ABBREVIATIONS AND ACRONYMS USED

AIDS	= Acquired Immune Deficiency Syndrome.
ANOVA	= Analysis of Variance.
CTE	= Colleges of Teachers Education.
FGAE	= Family Guidance Association of Ethiopia.
ICDR	= Institute of Curriculum Development and Research.
IEC	= Information, Education and Communication.
KAP	= Knowledge, Attitude and Practice.
MOE	= Ministry of Education.
NGOs	= Non Governmental Organisations.
NOP	= National Office of Population.
Pop/FL	= Population and Family Life.
Pop/FLE	= Population and Family Life Education.
Rop	= Regional Office of Population.
STD	= Sexually Transmitted Disease
UN	= United Nations.
UNESCO	= United Nations Education, Science and Cultural Organization
UNFPA	= United Nations Fund for Population Activities.



TABLE OF CONTENTS



	PAGE
LIST OF TABLES-----	v
ACKNOWLEDGEMENTS-----	vii
ABSTRACT-----	viii
CHAPTER ONE	
1. INTRODUCTION-----	1
1.1 Background of the Problem-----	1
1.2 Statement of the Problem-----	8
1.3 Objectives-----	9
1.3.1 General objective-----	9
1.3.2 The Specific objectives-----	9
1.4 Significance of the study-----	11
1.5 Delimitation of the study-----	13
1.6 Limitations of the study-----	14
1.7 Operational Definitions of Key Terms	15
1.8 Structure of the Thesis-----	16
CHAPTER TWO	
2. REVIEW OF RELATED LITERATURE-----	18
2.1 Population Problems-----	18
2.2 Educational Intervention on Population Problems-----	20
2.3 The Concept of Population and Family Life Education-----	23
2.4 Methods of Introducing Pop/FLE into the Formal Curriculum-----	25

2.5	The Need for Pop/FLE in Teachers Education-----	27
2.6	The New Population and Education Policy of Ethiopia-----	29
2.7	Population and Family Life Education in Ethiopia-----	34
2.8	The Importance of KAP study in Population and family planing programmes-----	35
2.9	The Relationship of Knowledge, Attitude and Practice in Population and Family Planning-----	37
2.10	Explanatory Variables for Variation in the Population and Family Life Knowledge, Attitude and Practice	40
2.10.1	Residential Background-----	41
2.10.2	Gender Difference-----	42
2.10.3	Religious Background-----	43
2.10.4	Ethnic Groups-----	44
2.11	Research Findings of KAP Studies on Population and Family Planning in Ethiopia -----	45

CHAPTER THREE

3.	RESEARCH DESIGN AND METHODOLOGY-----	48
3.1	Source of Data -----	48
3.2	Sampling Procedure-----	48
3.3	Instruments Used-----	49
3.3.1	Achievement Test-----	49
3.3.2	Attitude Inventory-----	50
3.3.3	Rating Scale-----	51

3.3.4	Interview-----	52
3.3.5	Content Analysis-----	53
3.4	Administration of the Instruments-----	54
3.5	Method of Data Analysis-----	55

CHAPTER FOUR

4.	ANALYSIS AND INTERPRETATION OF DATA----	58
4.1	Pop/FL Knowledge of the Students :	
	The Pilot Study Results-----	59
4.2	Students' Pop/FL Attitudes-----	71
4.3	Students' Pop/FL Practice-----	85
4.4	The Relationship Between Knowledge, Attitude and Practice of Students	88
4.5	The Status of Pop/FLE in Various Courses-----	89
4.6	Effect of the Course Upon the KAP of the Students-----	92
4.6.1	Change in the Knowledge of the Students-----	92
4.6.2	Change in the Attitude of the Students-----	95
4.6.3	Change in the Practice of the Students-----	97

CHAPTER FIVE

5.	SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	99
5.1.	Summary-----	100
5.2.	Conclusions-----	105
5.3.	Recommendation-----	107

REFERENCES

Appendix A



Appendix B

Appendix C

LIST OF TABLES

TABLE	PAGE
1. Means and Standard Deviations of Pop/FL Knowledge Test Score of the Students-----	60
2. Proportion of Students who Scored Above and Below the Grand Mean in the Knowledge Test.--	61
3. ANOVA Summary for Pop/FL Knowledge Test By Type of College -----	62
4. Source of Pop/FL Information of the Students By Type of College-----	63
5. ANOVA Summary for Pop/FL Knowledge Test By Level of Previous Knowledge of the Students---	65
6. ANOVA Summary for Pop/FL Knowledge Test By Sex---	66
7. ANOVA Summary for Pop/FL Knowledge Test By Religion-----	67
8. Multiple Comparison of Means Using Scheffe Method for the Four Religious Groups-----	68
9. ANOVA Summary for Pop/FL Knowledge Test By Residential Background-----	69
10. Attitude of Students Towards Pop/FL Issues-----	74
11. Means and Standard Deviations of Pop/FL Attitude Scores with Respect to Different Variables-----	77
12. ANOVA Summary for the Attitude of Pop/FL Problem By College-----	78
13. ANOVA Summary for the Attitude of Pop/FLE	

	By College-----	80
14.	ANOVA Summary for the Attitude of Pop/FL Problem By Religion-----	81
15.	ANOVA Summary for the Attitude of Pop/FL Problem By Residential Background-----	82
16.	ANOVA Summary for the Attitude of Pop/FL Problem By Previous Knowledge-----	84
17.	ANOVA Summary for the Attitude of Pop/FL Issues In General By Previous Knowledge -----	84
18.	Students Judgement of Their Pop/FL Practice----	86
19.	ANOVA Summary for Pop/FL Practice By Previous Knowledge-----	87
20.	Interrelations of Knowledge, Attitude and Practice of the Students-----	88
21.	Proportion of Pop/FLE Related Objectives, Contents and Time Devoted in Each Department--	90
22.	Mean Comparison for Pre-and-Post-tests on Knowledge-----	92
23.	ANOVA summary for Pop/FLE Knowledge post-test By Type of Department-----	94
24.	Mean Comparison for Pre-and-Post-tests on Attitude Towards Pop/FL Problem-----	95
25.	Mean Comparison for Pre-and-Post-test on Practice-----	97

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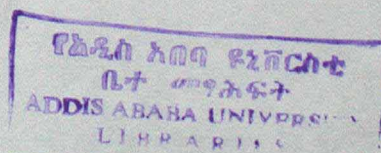
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ABSTRACT

The purpose of this study was to assess the status of Pop/FLE in the curriculum of Teachers Education in Ethiopia and to findout its effect upon the knowledge, attitude and practice of the students.

To do this, two Regional Colleges of Teachers Education namely; Awassa and Gonder were randomly chosen. From the total of 460 students population in the two colleges 154 sample students were randomly selected. Sixteen department heads and 5 curriculum designers were interviewed. A questionnaire consisting of 20 items multiple choice test, 20 items attitude inventory, 12 items rating scale and one open ended question was administered for the sample students twice as a pre-and post-test to see the effect of the course. The course catalogues and course contents were considered as sources of supplementary data. Then, percentage, mean, multiple comparison of the mean, analysis of variance (ANOVA), Pearson correlation coefficient and t-test were used to analyse the data.

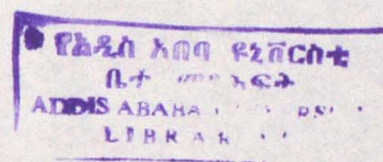
The study revealed that the students seem to have Pop/FLE knowledge and positive attitude and practicing it at the time of their enrolment to college. However, variation in their KAP level was found as a result of differences in College, sex, religion, residential background and previous exposure to Pop/FL information. Besides positive relationship was found between their knowledge level and attitude, and their knowledge and practice. It was found that, there are significant proportions of Pop/FL related objectives and contents in each department though they lack depth and special concern.



Change in their knowledge, attitude towards Pop/FL problem, and in their practice was found during the post-test.

However, their change of knowledge varies from department to department.

Finally, based on the findings, suggestions and recommendations were made towards the improvement of the subject in question.



CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Problem

The relationship between population size and growth and socio-economic development is one of the crucial issues of the day. Rapid increase in population size is expected to exert a lot of pressure upon natural resources and diminish the rate of capital formation of a given country. In this respect as Kebede (1990), quoting the neo-Malthusian theoreticians, says children can be a source of poverty by minimising the income that families generate. In other words, an additional child for a family is expected to incur an additional living expense.

But as Debesai (1983) said, the case in Ethiopian rural culture is different from this. Additional child in most of Ethiopian society is considered as an asset for that family. Because irrespective of its gender a child is expect to offer additional production labour to his family. Therefore, early marriage, i.e. at the age of 10 for first marriage of girls

and 15-17 years for boys is an accepted practice of most rural Ethiopian people.

Accordingly, as it was indicated by UN (1989) like in most developing countries, there is a decline of mortality and an increase of fertility in Ethiopia. The Crude Death Rate (CDR) has declined from 32 to 25.6 per thousand from 1950's to 1980's. On the other hand, according to Sisay (1995), the country's Total Fertility Rate (TFR) increased from 5.8 in 1965 to 7.5 children per women in 1990 resulting an average Population density of about 48 persons per Km² and natural increase of about 3.1%. Due to this fact, as mentioned by the Population reference bureau (1996), the Ethiopian Population size which is 57.2 million now will be double in 23 years if it continue at the current rate where as almost equal Population size of 58.4 million for France is expected to take 217 years to double itself.

Consequently, as Daniel (1989) stated, specially the Population increase in rural Ethiopia demands expanded land for cultivation. This need of agricultural land forces the



habitat to clear forests. Due to this fact, the total area of the forest land which had covered 40% of the surface area of Ethiopia at the beginning of this century has reduced to only 4%. Through time, the cultivable land become scarce and ecologically marginal lands such as steep slopes, valleys and depressions will be occupied and cultivated. Besides, a continuous farming of land has shortened the following period for the restoration of soil fertility. Also over cultivation and overgrazing lead to soil erosion and washing away of the soil nutrients. This in turn leads to decline in agricultural yields of Ethiopia. Finally, the low declining agricultural per capita production which partly resulted from the deterioration of the land is expected to cause malnutrition, diseases, and the physical weakness of the people.

In addition to this, an aspect that deserves attention is adolescents' sexual practice. Since the opportunity of marriage for Ethiopian girls and the respect of her family was mostly determined by her virginity, premarital sexual activity was completely unacceptable. But through time, as Mekonnen (1991) said, sanctity and respects of virginity which served

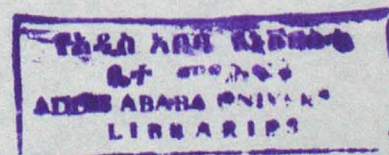
as traditional preventive measures against unintended pregnancies and illegal abortions were eroded as a cultural practices. Furthermore, marriage postponement because of schooling have increased teenage pregnancy problems. For instance, in a study conducted by the Family Guidance Association of Ethiopia /FGAE/ (1982) in Addis Ababa, it was found that 21% of adolescents were experiencing heterosexual practice.

Moreover; to adolescent girl, pregnancy means an interruption of her education and career, and if it is out of wedlock, she might not be engaged in marriage throughout her life. Furthermore, unmarried pregnant girl in Ethiopian society face shame and rejection by her parents as well as by the society. To avoid this fate, either she tries to abort, or commit suicide, or if the infant is born, she may abandon it.

Therefore, all these problems seem to initiate discussions on the corrective measures of Population problems of the country. One of the corrective measures is expected to

be an educational intervention that focuses on Population and family life (POP/FL) problems as well as their solutions.

Arowolo (1989) said, that the beginning of debates on Population issues and the initiation of the need for education as it is related to Population matters traces back its history to the time of Robert Malthus. Malthus, with his intention of preventing the undesirable consequences of an uncontrolled Population growth has proposed for the establishment of a more extensive system of national education. However, the recognition of Population and Family Life Education (POP/FLE) in the formal curriculum is of recent phenomena. It emerged due to the intention of raising the low fertility rate of married couples in Sweden in the early 1930s. Later on, after the UN (1974) has conducted a conference on Population and development at Bucharest - where the world's Population plan of action was emerged and evolved - different countries showed interest in the inclusion of POP/FL issues in their policy formulation. Gradually, Population and Population-related issues become the focus of discussion among educators, economists, policy makers and the general public at national



and international levels. Thus, the promotion of Population knowledge and the improvement of Population situation in any nation seems to call for the need of POP/FLE.

In line to this, the researcher of this paper strongly believes that the sky scraping Population growth and its pressure on the natural resources of Ethiopia can be checked and reduced by the dissemination of POP/FL knowledge. Besides, the most significant part of disseminating the knowledge is believed to fall upon teachers. In support of this view, Arowolo (1989) further suggested that one of the strategies for the promotion of POP/FLE in Ethiopian schools is educating and sensitising teachers by providing pre-and in-service training in POP/FLE so as to enable them incorporate the basic concepts of POP/FLE into their teaching of other topics. Therefore among other educational institutions Colleges of Teachers Education (CTE) are the most appropriate places to achieve this goal. They are to those teachers who have already expected to strengthen their programs in offering

POP/FL knowledge to been assigned in schools and the would-be-teachers in their Pre-and-in-service training activities.

As in most of the countries in the world, feeling the high Population growth and its consequence upon the socio-economic development, the Ethiopian government has issued a "National Population Policy" in April 1993. In this policy, as the responsibilities of the Ministry of Education (MOE), the introduction of POP/FLE in the Curricula of Junior and Senior Secondary schools and higher institutions was suggested.

Based on this Policy, the Ministry of Education, through its Institute for Curriculum Development and Research (ICDR) (1996a) has mentioned as it has started integrating POP/FLE in the Curriculum of Primary Schools since 1994 and will continue until it is fully integrated at all levels from grades 1 to 12 by the year 1997. Besides, ICDR (1996b) stated mentioned that POP/FLE integration process in the newly opened CTE have been taken place in 1996.



In view of these notions, the POP/FLE competencies of the students in CTE of Ethiopia became the focal point of this study.

1.2. Statement of the Problem

With the advent of the Ethiopian Population Policy (1993) and that of the Education and Training Policy (1994), CTE, like other learning institutions, are expected to be charged with the responsibility of integrating POP/FLE in their formal curriculum. Under the aegis of this dictation, it has been mentioned that various CTE adopted the contents of such education in their training system. For instance, as it was mentioned by ICDR (1996b) and Tewabech, Woube and Getachew (1996), while the Kotebe College of Teachers Education and the Bahir Dar Teachers' college had decided to introduce POP/FLE into their curricula as a common course for all teacher trainees beginning of the academic year 1996/97, the integration process had already took place in the lower and upper primary school teachers training programs in their recently developed syllabi of 1996.

It is thus, a high time to investigate the status of POP/FLE integration in the curriculum of CTE and its effect upon the students' knowledge, attitude and practice (KAP).

1.3. Objectives

1.3.1. General Objective

The purpose of this study is to assess the status of POP/FLE in the curriculum of the CTE in Ethiopia. It attempts to examine the POP/FL KAP level of the students and whether there is correlation between the contents of the curriculum and the students' POP/FL competencies in the form of knowledge, attitude and practice.

1.3.2. Specific Objectives

- to find out the KAP level of the students towards POP/FLE at the time of their enrolment in CTE:
- to find out whether or not their sex, residential background, religious and ethnic variations, their earlier exposure to POP/FL information, and their college differences have relationship with the students' KAP.

- to find out the relationship between the trainees POP/FL KAP.
- to assess the status of POP/FLE in the first year first semester courses of the CTE.
- to assess whether correlation is established between the students KAP of POP/FL issues and the courses offered during the semester.

Towards the attainment of these objectives, answers to the following questions are expected.

1. What is the level of the students' KAP POP/FLE at the time of their enrolment in CTE?
2. Is there any correlation between the KAP of POP/FLE of the students and their sex, residential background, religious and ethnic variations, their exposure to POP/FL information and College difference?
3. Is there any relationship between the trainees knowledge, attitude and practice?
4. Do the objectives and contents of the first year first semester courses in each department cover POP/FL issues

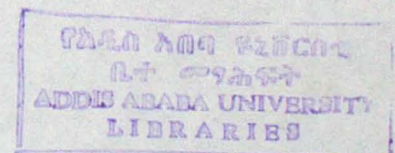
and how much percent of the total objectives and contents do they account?

5. Is there any correlation between the knowledge, attitude and practice of POP/FLE of the students and the courses offered in the colleges.

1.4. Significance of the Study

POP/FLE was given little or no attention in the past history of the Curriculum of formal education in Ethiopia. But recently initiatives have been taken to integrate the subject to the formal Curriculum of primary and secondary schools as well as higher institutes. Moreover, focus was also given to the integration process of the subject to the curriculum of teachers education. Thus, this study is designed with expectation that its findings could serve the following purposes:

1. It is stated before that the newly designed curriculum of primary schools have started integrating POP/FLE topics in different subjects. Thus, the effective implementation of this program requires information as to how teachers who are expected to implement the



new curriculum are making the necessary endeavours in emphasising concepts of POP/FLE. Therefore, the findings of this paper could serve MOE in providing information about the level of POP/FLE in the curriculum of CTE and the KAP level of the students with regard to POP/FLE.

2. As it is customary in Ethiopia, teachers have been potential agents to participate in campaigns like Literacy, Development Through Co-operation, Population and Housing Census etc. They are also expected to serve as trained manpower when socio-economic and demographic campaigns are undertaken. Therefore, the findings of this study are believed to serve FGAE, the National Office of Population (NOP) of Ethiopia, and other non governmental organisations(NGOs) (who are interested in disseminating large scale programs on Population and community development) through the provision of information about the KAP level of the would be teachers.

3. Besides, due to the dearth of research in the subject under discussion, this study is expected to initiate others to undertake deeper further study on the problem through provision of baseline information.

1.5. Delimitation of the Study

The research work is delimited to randomly selected two CTE in Ethiopia i.e. Gonder and Awassa (which are recently promoted to College level). However, since they are from different Regional States they are expected to represent different cultural backgrounds. CTE students are selected as the focal point of this study for they are recruited from different cultural and ethnic backgrounds and after the completion of their studies they are expected to be assigned mostly in the rural areas where the majority of the Ethiopian people live. Since they have access to communicate with the majority of the people, they are expected to provide informal, non-formal and formal education and guidance service on POP/FLE issues.

The study is also delimited to the assessment of the status of POP/FLE in the first year first semester courses of the CTE for almost all of the common courses in each department are expected to be offered during this semester.

1.6. Limitation of the Study

Due to time and financial constraints the study is limited to two CTE. It would have been better if the samples are represented from all colleges of teachers education to get exhaustive information on the effect of ethnic and cultural diversities.

The other limitation of the study is that its focus is only on the first semester courses. Though it was a time to offer common courses, it would have been better if conclusions are made after the evaluation of the whole diploma program of CTE to see the variation on the predictor variables and the effect of the courses.

Finally, the limitation of the test-re-test administration method is also unavoidable here in this study. That is, due to the nature of the pre-and post-test administration some of the students may remember responses of some test items from their past test experience.

1.7. Operational Definitions of Key Terms

- Attitude:- The like or dislike feeling an individual has towards POP/FL.
- Family Planning:- The practice of married couples or sex partners in using contraceptives to control conceptions, space pregnancy and/or prevent sexually transmitted disease including AIDS/HIV.
- Knowledge:- Knowing about POP/FL and being able to recall it from memory. It includes gaining a variety of concepts & skills pertaining to POP/FL and acquiring a basic understanding of the issue.

Population and Family Life Education (POP/FLE):- An educational intervention strategy in the formal curriculum of schools for dealing with Population and family life questions.

Practice or Skill:- refers to behavioural intentions and involvement in actions of POP/FL related activities (such as family planning, education dissemination, group discussion in Population and environmental issues etc.)

1.8. Structure of the Thesis

The thesis is organised in the following manner. Chapter one is an introduction which gives the background of the study in Ethiopian context and states the problem of the study. This chapter also shows the general as well as the specific objectives of the study. The significance the scope and the limitation of the study are presented here. Lastly, the



operational definitions of key terms are also presented in this chapter.

Chapter two is a review of the pertinent literature beginning with the Population problem and a brief history of the educational intervention to alleviate it. In this chapter the need for POP/FLE in Teachers Education and ways to integrate it in the formal curriculum are dealt. This is followed by a review of the new Population and Education Policy of Ethiopia and the arguments set forth by the primary proponents of KAP studies in POP/FLE. Then the interrelationship between knowledge, attitude and practice and KAP studies conducted on POP/FL issues in Ethiopia were assessed.

In Chapter three, the sampling technique, the instruments used to collect the data and the method of data administration are presented. Lastly, the statistical methods used to analyse the data are presented.

Chapter four includes the results of the study with a detailed discussion of the findings. In this part those dependent variables which could bring statistically significant results are presented and analysed.

Finally, chapter five provides the summary, conclusion and recommendation of the study.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Population Problems

Foremost among today's pervasive social problems is the rapid growth of Population. UNESCO (1974) calls the problem as "Vital revolution". According to this document it was estimated that world Population reached the first billion mark sometimes around 1825 AD; the second billion mark during 1930 i.e. after 105 years; and the third billion in 1960 (after 30 years) and the fourth billion in 1985 (after 15 years). This statistical figure shows that there exists two births per second and over 170,000 new individuals begin life on planet Earth each day. The trend is alarming. If the world Population continues to multiply at this explosive rate, in just seven or eight centuries from now there would be ten people to every square meter of space on the globe, including all its oceans, deserts, mountains, and polar regions. The

capacity of our world to support this an ever increasing Population is a wide concern and debate.

Among the first who have concentrated on Population problems is the English economist Thomas R. Malthus. As cited by Antony (1970) the main idea of Malthus in his "Essay on the Principle of Population" published in 1798, is that Population increase more rapidly than food supplies, and that war and disease necessarily kill off the extra Population. He argued that the problem of world Population involves for more than finding enough standing room and enough food per person to allow survival.

Supporting his view, Demerath (1976) has mentioned the emergence of serious shortages globally in food and energy in addition to the existence of scarcities of unpolluted air and water in many countries.

Similarly, as Omran (1985) stated, the total Population of Africa was estimated to be 143 million in 1920. The mid 1983 estimate of the Population of Africa reached 513 million i.e. a three - and - one half fold increase in only 63 years. At this rate, by far the highest among all continents,

Africa's Population could double itself in 23 years in contrast to the more developed countries which have a much longer doubling time, many over 100 years. Due to these facts, Africa is characterised by shortage of food supply, poor health facilities, low literacy level, poverty, etc. As a consequence, the politics of food, energy and Population become more evident by these days.

2.2. Educational Intervention on Population Problems.

As it was mentioned by UNESCO (1971) Population education is an educational process designed to equip the learner to understand the nature, causes and consequences of Population - related issues and problems. It aims at developing appropriate skills and attitudes of learners so that they understand, analyse and make decisions about Population related issues and problems which are personally meaningful and socially desirable. UNESCO suggests, therefore Population education to be offered for all citizens in a given nation as one of the major strategies to alleviate Population related problems.

In the same vain, Rafeal (1979) and Arowolo (1989) argued the provision of POP/FLE to all children and youth at schools to prepare the future generation as responsible parents. However, the recognition of POP/FLE in the formal curriculum is of recent phenomena.

As Kedir and Kirant (1991) stated, the concept of POP/FLE evolved first in 1935 as a response to the rapidly declining fertility of Sweden. The Population Commission of Sweden recommended the introduction of POP/FLE into school curriculum in order to inform learners about the Population condition of the country and help them to make informed and rational fertility decisions. some other industrial countries also realised the need of Population and sex education in their educational programmes due to the emergence of sex-related diseases and problems.

As it is stated by UNESCO (1971), in developing regions, particularly in Asia, POP/FLE emerged in recognition of inter relatedness between Population growth and socio - economic development. Therefore, they believe in the necessity of educating the general public about the interrelationship



between Population growth and socio-economic development. Towards this end, India introduced Population education into the school system in 1969 and the Philippines and the Republic of Korea introduced the Programme in 1970. Now, over one hundred countries, mostly in Asia, Africa and Latin America have introduced POP/FLE into their educational system in various forms and stages. The interest in this field has become greater and greater due to people's growing concern over adolescent related problems, wide spread of AIDS and deterioration of natural environment.

Most African governments are now aware of present Population related issues and problems, particularly the negative impact of rapid Population growth on economic development in the region. In its 1986 report, of UNESCO mentioned Kenya as the only African country which introduced POP/FLE as a separate subject in its school curriculum. Besides, most of other African countries preferred to integrate POP/FLE into selected subjects, such as, Biology, civics, Geography, Home Economics, Language, Social studies

etc. For instance, Nigeria has integrated POP/FLE into Biology, Geography, English, Social studies and Mathematics. Sierra Leone first introduced POP/FLE in Natural Sciences and later on in social Studies and Home economics.

2.3. The Concept of Population and Family Life

Education

There is no universally accepted definition of Population and Family Life Education (POP/FLE). There are difference in the goals and objectives of Population education since it should be set to reflect variables in the nature of Population problems in different societies. Thus, both governments and individuals perceive Population and family life issues differently and give different meaning for the POP/FLE.

For instance, as it was stated by Lana (1986) while in Asia the content of Population education focuses on Population trend and the quality of life, in sub-Saharan African countries health issues, urbanisation, migration and environmental issues are emphasised. Most Latin American and Caribbean countries on the other hand tend to focus on human sexuality and family life. However, there is a great deal of

common ground for defining POP/FLE. It is for the obvious reason that POP/FLE is mostly related to the family planning and sex education under the objective of creating acceptable sexual behaviours, minimising incidents of adolescent pregnancies out of the wed-locks and prevalence of sexually transmitted diseases (STDs) as well. Generally speaking POP/FLE is aimed at controlling fertility rates and moderating other related demographic implications.

On this line, one of the most commonly cited definitions of one Population education is that proposed at an Asian Regional Workshop sponsored by UNESCO in 1970. According to the workshop:

Population education is an educational program which provides for a study of the Population situation in the family, community, nation and the world, with the purpose of developing in the student rational and responsible attitude and behaviour towards that situation (UNESCO, 1971, p.13).

The area of interest in promoting POP/FLE is to create awareness among all the elements in the "target" Population i.e. students, through teaching and training. According to this definition, the ultimate aim of the program is also to effect a fundamental change in the behaviour of the students which is expected to generate 'desirable' demographic consequences on the Population, the economy and the society. Therefore, the writer of this paper agrees with this definition for it goes in line to the main theme of the research.

2.4. Methods of Introducing POP/FLE into the Formal Curriculum

As it is mentioned by UNESCO (1983), the introduction of POP/FLE into the formal curriculum can be made in one or more or combination of the following methods.

A. As a Separate Course: Some educators agree in the provision of POP/FLE as separate course so that it can provide students with an opportunity for systematic and sustained learning. But the problem here is that the difficulty of

accommodating a new course in an already overcrowded curriculum and the risk of preparing separate set of teachers.

B. As a Unit of a new Course: Another approach is to include the contents of POP/FLE into courses developed in response to a specific problem or new social needs. This may occur when Population issues are perceived as one of a set of current problems in framing a new course, or when certain of these issues fall within the major focus of a new course.

C. As Units of Existing or Revised Courses: In this approach, existing contents of different subjects in different grades will be assessed and analysed to find a point where to include POP/FLE material logically and meaningfully. New instructional units in POP/FLE will be prepared to suit the content and integrate into the courses. This method has been widely used in most countries. Most of them have the experience of including POP/FLE in such subjects as Social Studies, General Science, Biology, Mathematics, Home Economics and Health Education.

D. By Integrating into Existing Courses: This approach assumes that POP/FLE contents can be infused into the normal teaching - learning process throughout the curriculum. Since POP/FLE is by nature interdisciplinary, it should be possible to cover the contents by inserting it at appropriate points in the various subject areas. However, it requires full understanding and knowledge of POP/FLE and the content area of other subjects to know the relationship and made appropriate choice of entry points.

2.5. The Need for POP/FLE in Teachers Education

Viederman and Sloan (1973) stated that in the past few years a type of response to rapid Population growth has emerged in most developing countries. This is the response of the formal educational system which has taken the form of a curriculum innovation, known as "Population Education." Viederman and Sloan argued that Population education must be seen as one of a number of "beyond - family-planning measures" to make family planning a way of life. Besides this, studies on students' knowledge and attitudes towards Population matters show that there is a considerable gap between



students' concern and their knowledge of the processes involved and their consequences. This gap offers sufficient justification for the development of Population education programs, assuming that one of the functions of the formal school system is to assist students achieve "informed concern".

Therefore, as Viederman and Sloan argued, POP/FLE can be justified on purely intellectual and educational grounds. The characteristics of Population and the changes that occur in a Population have consequences for our lives, irrespective of our believe that the country is over populated or under populated. According to them, if it is educationally valid to study animal population in Biology courses (as do most schools), then it is equally valid and important to included the study of human Population in our Curricula of the Sciences, Social Studies, and Humanities curricula. Thus, this is one of the reasons why many countries took measures to integrate POP/FLE in their school curriculum.

To this end, UNESCO (1971) contended that the best designed output of Curriculum design would remain mere sterile if it fails to get effective channel of Communication between the curriculum designer of POP/FLE and the instructional system. Thus, UNESCO emphasised the high priority of needs to be given for the preparation of adequate in-service training of teachers if the implementation of POP/FLE is to succeed. Though the integration of POP/FLE is a new phenomena, as UNESCO (1983) stated, any measure for changing the content and methodology of education must be accompanied by steps to prepare teachers for the change. Accordingly, ICDR (1996b), has mentioned that the need for trained teachers to teach POP/FLE in Ethiopian schools and thereby the need for the introduction of POP/FLE programmes in teachers colleges and higher institutions.

2.6. The New Population and Education Policy of Ethiopia.

As it was mentioned by Negussie (1994), the Ethiopian Population has low life expectancy and per capita income, and high fertility and unemployment rate. Moreover, two third of

the Population lives in absolute poverty, the provision of health facilities and schooling is at its poor level. On his part, Seyoum (1994) stated the devastating consequences. According to him, the current Population of Ethiopia which is estimated to be about 57.2 million (where the majority live in rural areas) resulted in high rate of deforestation, soil deterioration, problem of pure water supply, etc. Also, problems of social provisions such as housing, schooling, health service and large proportion of unemployment became characteristics of urban centres.

In response to these and many other problems which are associated to rapid Population growth, the Transitional Government of Ethiopia has adopted a National Population Policy of Ethiopia in April 1993. The policy has five general and eight specific objectives which focus on methods of reducing the high Population growth and strategies of attaining its goal.

Among the strategies that are emphasised more, include, the dissemination of POP/FLE and information and the establishment and implementation of counselling services in the educational system. Towards this end, the Ministry of Education, the Ministry of Information, the Ministry of Health, Addis Ababa University and others were given responsibilities to the implementation of the policy and various programmes emanating from the Population policy.

Accordingly, the National Office of Population (NOP) has initiated the establishment of regional offices of Population throughout the country. Therefore, as it was stated by NOP (1996), Regional Office of Population (ROP) and multi-sectoral technical Committees had been established in Tigray, Amhara, Oromiya, Southern Nations, Nationalities and Peoples', Gambella, and Harari Peoples' National Regional States since 1995. These offices, in turn, have organised several regional workshops on Population and development in different times.

On the other hand, as it was stated before, the Ministry of Education is one of the responsible governmental organisation

which was assigned to implement the Population policy. The policy gives the MOE the responsibility to:

Introduce Population and family life education in curricula of junior and senior secondary schools and in the higher institutions of learning.

Expand Population and family life education and assist in basic training of IEC through the Educational Media Agency.

Study the factors militating against female participation in the educational system and design appropriate corrective measurements.
(National Population Policy p.54)

Based on these assignments, the New Education and Training Policy which was adopted in 1994, stated the need for the creation of citizens who can strive towards the elimination of backward cultures and who properly utilises their environment. Towards these end, the ICDR of MOE has established a panel for POP/FLE, publishes a biannual Population Education News letter and four different POP/FLE monographs, conducts seminars and

workshops on POP/FLE, and initiated the integration process of the subject in schools and higher institutes.

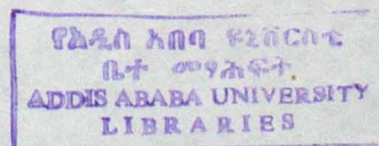
However, it does not mean that there was no attempt to promote POP/FLE in Ethiopia. For instance, as Andargachew (1991) says the FGAE is one of the leading non Governmental organisations engaged in providing information, Counselling and Clinical services to families who desire for spacing the birth of their children. Though this association had started carrying out its activities informally, since its establishment in 1966 the association is engaged in the promotion of family planning service throughout the country for the last 31 years. Other than the seven co-ordinating offices; (i.e. Addis Ababa, Nazareth, Harare, Jimma, Awassa, Dessie and Bahir Dar;) for its out-reach programme of IEC, the association had attempted to teach young people in schools. To do this, it organises seminars for school teachers and principals on POP/FLE arrange film shows, and lecture sessions. Furthermore, it plays an important role in promoting the integration of POP/FLE in the school curricula

by liaising with the Ministry of Education and by facilitating participation of volunteers.

2.7. Population and Family Life Education in Ethiopia.

As it was mentioned by ICDR (1995), POP/FLE in the formal Curriculum of Ethiopia was introduced in 1989 as a pilot project in 21 high schools. It was initiated by the technical support of UNESCO and the funding of UNFPA. The project was launched in order to find out the extent of receptivity and feasibility of the programme for nation-wide implementation.

During this pilot phase over twenty five materials in POP/FLE were developed and implemented in addition to the training of teachers, inspectors and headmasters through seminars and workshops. ICDR reported that the pilot programme was successfully completed in 1993. And the nation wide implementation of POP/FLE through the integration of it into different subjects like Geography, Home Economics and Biology of secondary schools was executed by ICDR. However, the nation wide implementation was delayed due to the adoption of the new Education and Training Policy.



As the ICDR (1996 a) report indicated, the integration of POP/FLE in the subjects of the newly developing curriculum is started in 1994 in the Ethiopian primary and secondary school curriculum. The integration is being practised at tertiary levels, too. Kotebe College of Teachers Education and the Bahir Dar Teachers' Colleges have opted for a separate common courses with about 3 to 4 credit hours for both degree and diploma programmes. The other four Teachers Training Colleges i.e. Jimma, Awassa, Gonder and Adwa (which have been promoted from TTIs to CTE in 1996) have integrated POP/FLE content into different career subjects like Biology, Geography, History, Civics, Music, Art and Sports. Similarly, the integration process of POP/FLE has took place at Alemaya University of Agriculture, Awassa College of Agriculture and Wondo Genet Forestry College in September 1995.

2.8. The Importance of KAP Study in Population and Family Planning Programmes.

Berelson (1969) argued that KAP studies are a special tool used in Population and family planning research. He believed also that such studies can investigate the extent of knowledge

about contraceptive methods, the prevailing attitudes about contraception, and the prevalence of contraceptive use in a particular Population. KAP studies provide data which are useful for numerous purpose. For example, they provide information on important socio-demographic characteristics among contraceptive users versus non-users.

As the Population Council (1970) mentioned, KAP studies in Population issues are classified into four different categories: descriptive, evaluative, directive and validative. The first type i.e. descriptive KAP study aims to describe what people in a community do and believe with regard to Population issues and family planning. This type of study provides useful information upon which future fertility control programs can be used. The evaluative KAP study is used to document the relative success of a family planning programme. It involves the comparison of descriptive baseline survey results, with subsequent, comparable survey data. This type of study provides a quantitative measure of whether a

given Population and family planning programme has had an impact on a targeted community.

On the other hand, the directive type of KAP surveys provide information to guide Population and family planning programme decision-making. Population and family planning officials can use the results of KAP studies to formulate policies regarding Population and family planning activities in their areas. The fourth type i.e. the validative KAP studies are conducted to validate data from other sources on Population and family planning programme acceptors. For example, family planning service statistics can provide data regarding the number of new acceptors in a clinic, and census data may provide information on contraceptive behaviour in a Population.

2.9. The Relationship of Knowledge, Attitude and Practice in Population and Family Planning.

When the relationship of the knowledge and practice of family planning methods is concerned, Siddh (1974) in his experimental family planning information and education programme of Taiwan found that, an increase from 36% to 60% in

the use of some form of birth control methods (contraception, abortion, or sterilisation) among the Taichung Couples after they acquired the knowledge about family planning. Besides that, the proportion of those who had ever used contraception has also increased from about 20% to 40% at the end of the programme. The programme more or less proved successful.

Another research finding by Caldwell and Igun (1972) showed that knowledge about contraception and abortion and its practice had led to an eventual fertility decline in Nigeria. As they mentioned, surveys on Lagos showed the percentage of respondents wanting five or more children declining from 93 to 70 and the use of birth control methods has rose from 3 to 11 after their educational programmes. Therefore, these studies show the existence of linear relationship between contraceptive knowledge and practice.

Similarly, regarding the relationship of attitude and practice of family planning, as Molnos (1968) found, showed the existence of positive relationship. He has mentioned that people's birth control attitudes were a good predictor of

their behaviour. Supporting this view Mamlouk (1982) has also said that positive attitude towards birth control precedes effective practice of it.

Contrary to these, Pai Panandiker, Bishnoi and Sharma (1978) mentioned that, although most of their samples were aware of several methods of family planning they were practising few or none of the methods. They also found that most of the respondents of their sample in India were preferring small family. But, the attitude of respondents towards the use of some family planning method was not as it was expected to be. In addition to this, Bogue (1972) found that knowledge of family planning methods need not necessarily indicate a positive attitude or a strong motivation to practice family planning. According to these findings a person may completely informed about contraception while holding a negative attitude towards it and being completely unmotivated to use it.

In general, therefore, according to available literature there is no common agreement upon the existence of directional

relationship between people's knowledge, attitudes and practice of Population issues and family planning.

2.10. Explanatory Variables for the Variations in the
Population and Family Life Knowledge, Attitude
and Practice.

Knowledge of contraceptive methods may vary among a given Population. Similarly their attitudes may vary in intensity. A person may have a mildly negative set towards family planning, he may accept it with qualifications, or he may accept it completely and with great deal of favour. On the other hand, there are also factors that are associated with the practice of family planning and contraceptive uses. Though there are several variables which could explain the causes for the disparity between the knowledge , attitude and practice of family planning and Population issues, what causes such disparity is not well researched. However in this study gender religions, ethnicity, and residential background are considered under the presumption that they may explain the observed disparities.

2.10.1. Residential Background

Rodriguez and Cleland(1984) had mentioned that the total fertility of rural residents exceeds that of urban dwellers in all World Fertility Survey (WFS) countries. Likewise, the United Nations Population Division (1983), has stated that urban fertility was on average 29% less than rural fertility among the least developed countries. Similarly, Krisha (1968) found differences in the degree of acceptance of contraception among rural and urban Population where urban people were more in favour of family control. According to this study, to a majority of rural people, birth control means "Complete Stoppage" of further births in their families.

Rawtson and Geoffrey (1972) conducted a study in Ghana and found that urban areas on average having lower birth rates than the rural areas by between 9 and 15%. They also found that people who were born in large towns to have more knowledge and practice of family planning than people who were born in a rural area and moved to town later on.

2.10.2. Gender Differences

Traditionally, family planning programs have regarded women as the acceptors of contraception. But, as Brody(1974) and Card (1978) mentioned, a sizeable number of women cannot practice family planning because of the objection of their husbands. Stockes (1980) said that, in many developing countries men deny their wives access to contraception because they fear it will encourage her promiscuity, diminish his position in the family, or reduce his masculine image. This is usually the result of the existence of double standards.

Similarly, Pai Panandiker, Bishnoi and Sharma (1978) found more women to be inclined to adopt family planning than men. In this study while 62.1 % of the total female samples were accepting the family planning programme, the proportion for male acceptors was only 51.7 % of the total male respondents. Therefore, it is evident that females relatively have high knowledge and favourable attitude towards family planning in many countries. Since the consequence is more serious for

them, they reasonably tended to practice family planning to avoid the problem.

2.10.3. Religious Background

Manisoff (1970) has stated that all religious faiths approve child-spacing. But some were observed while severely limiting the method used. According to Manisoff, in general, Muslims, Hindus, Buddhists, Confucianists and most Protestant and Jewish groups have no opposition to delaying pregnancy by any type of mechanical, chemical, or surgical contraception. She found the Roman Catholics, however, stressing the individuals obligations for procreation and parental responsibilities and approving only the rhythm method of birth control. Similarly, Siddh (1974) has mentioned that the Hindu and Muslim religions do not provide any evidence against family planning.

On the other hand, Omran (1985), Kasarda, John and Kirsten (1986) had pointed out that the Catholic and Islamic religions have been found to be a major obstacle to the adoption of family planning. In this regard a study conducted in Addis Ababa, Ethiopia, by Seyoum (1989) has also showed that Muslims were having higher fertility than Christians where members of

the Orthodox church were having the highest fertility rate followed by Protestants and Catholics among Christians as a whole. Therefore, there is difference in the research findings regarding the influence of religion upon the knowledge, attitude and practice of family planning of different Population. This could arise from study subjects variability. Being in one religious creed may not necessarily imply complete obedience of the faith. Individuals vary in the degree to which they attend church (or mosques).

2.10.4. Ethnic Groups

Many African ethnic groups practice family planning in the form of spacing births. For instance, a study by Molnos (1968), Williams (1973), and Ware (1976) revealed that the Yorubas, and other ethnic groups in Nigeria, as well as the Kikuyus, the Luos, and Gandas in Kenya have had in their culture a built-in system for spacing births. Another study by Bleck (1976) found that birth spacing being practised among the Chaga, Giriama, Lango, Lugbera, Mbeere, Meru, and Somalis in East Africa. Adding to these, Minkler (1972) and King

(1973) mentioned that in many African cultures, intercourse is prohibited during lactation which in African women by tradition usually last two to three years.

Though these practice of traditional family planning method is common to most part of Ethiopia (such as breast feeding) variation in the knowledge of modern contraceptive method is observed. For instance Girum (1995) found the Oromo students more knowledgeable than the Amhara and other ethnic groups.

2.11. Research Findings of KAP Studies on Population and Family Planning in Ethiopia.

Erku (1974) in a research conducted at Kotebe TTI in 1973 found the understanding of students on the subject of Family Life Education and their orientation towards sexual life to be below average and Pseudo-scientific. In fact, there was no as such subject known to be POP/FLE given in any level of the school system. The only source of information about sexuality was found to be their peer groups which again is based on unscientific foundations with manifestation of male dominance. However, girls were found to be better informed about family planning than boys and both sexes showed positive attitude

towards family life education. In addition trainees were found to be very keen to learn about human sexuality and to benefit from this knowledge.

Another study conducted in Arsi zone by Girum (1995) showed that about 62.6 % of the adolescents in the study having family planning knowledge with the best known method being pill followed by condom, rhythm and Intra Utrine Device (IUD). Moreover, married adolescents reported to be more knowledgeable and familiar with family planning methods than the never married and divorced ones. As far as source of family planning knowledge was concerned teachers were found to be the most acknowledged sources followed by health personnel's and local mass media.

In this study, the majority of adolescents were found having desire to know more about family planning which should be integrated in a school curriculum. However, about 48.6 % of respondents claimed that they do not agree on the use of contraception by never married adolescents. Concerning their practice of contraception, male students were exceeding in using contraceptives with high prevalence among married adolescents. Also prevalence of contraceptive use was

observed to be associated with a high level of education. The proportion of respondents using contraceptive method at that time was found 32.5%, 16.0% and 13.9% respectively for Muslim, Catholics and Orthodox religion followers of the sample Population.

CHAPTER THREE

3. Research Design And Methodology

Descriptive research methodology was employed to study the Population and Family Life (POP/FL) knowledge, attitude and practice of students in two colleges of teacher education.

3.1. Sources of Data

The major data sources of this study were:

- a) students from the two colleges who were enrolled in 1996/97 academic year;
- b) heads of each department in both colleges
- c) curriculum designing committee
- d) the course catalogues and course outlines of first semester

3.2. Sampling Procedure

Among the four regional Junior Colleges of Teacher Education [Jimma, Awassa, Adwa and Gonder which were recently promoted from TTIs to Colleges of Teachers Education (CTE)] Awassa and Gonder were selected randomly by drawing a lot. This number comprised 50% of the regional colleges of Teachers Education in the country.

Out of 193 male and 46 female first year students in Awassa College and 184 male and 37 female students of Gonder College, taking approximately 33% of the total Population, 125 male and 29 female (which sum up to 154 students) were selected from

both Colleges. This proportion was maintained in sampling students from each departments.

Besides, 16 heads from each department of both Colleges and 5 members from the Curriculum designing Committee were included in the sample from Kotebe College of Teachers Education. Moreover, the course catalogue and course outlines of first year first semester courses were used to collect relevant and detail information on the status of POP/FLE in Colleges of teachers education.

3.3. Instruments Used

3.3.1. Achievement Test

A twenty items multiple choice test was administered to the students to determine their knowledge at the time of their enrolment to the college and how much they progressed after they attended first semester courses (See appendix A part two). The items were adapted from Gough (1974) "Miller - Fisk Sexual Knowledge Questionnaire" and attempts were made to include Population issues.

The mean score for the sample Population was set up as standard below which the students can be judged to be low achiever and above which they are judged as high achiever. Therefore, those who scored equal and above the mean were considered to have high POP/FL Knowledge, while those who scored below the mean were considered as having low performance with respect to the knowledge of Population issues. This standard was taken as frame of reference during both the pre-and post-tests.

Though the instrument was adapted from standardised test, it was essentially important to see its reliability in our case. Hence, pilot test was administered to a sample of students in Kotebe College of Teachers Education. The internal reliability estimate of the test as determined by KR20 method was 0.83 which was sufficiently large to justify its internal consistency.

3.3.2. Attitude Inventory

A Likert-type scale was employed to measure students' attitudes towards POP/FLE and problems. A twenty-items scale which was subdivided into two parts; i.e., the first 10 items focused on POP/FL problems and the rest 10 items focused on POP/FLE (See appendix A part three), were designed and administered. The items were adapted from Panda and R. Kanungo (1964) "Scale of Measurement of Attitudes towards Family planning" and modified to make the instrument more culture-oriented to our country. Ten of the items were worded as they could reflect favourable while the rest 10 were reflecting unfavourable attitudes.

The alternatives were weighted as 4,3,2,1 representing strongly agree to strongly disagree in scoring favourable statements; and scoring was reversed when unfavourable statements are presented. The maximum possible attitude score for each of the subdivisions; i.e., the POP/FL problem which was designated as "a1", and POP/FL education which was

labelled as "a2" in this study; was 40 and the minimum possible score was 10. Then taking the average score 25 as a reference, scores equal and above it were considered as indicator of favourable attitude and below this point were considered as indicator of unfavourable attitude. The pilot study indicated that its reliability as determined by Cronbach alpha was 0.78.

Similarly, in determining the students' overall attitude towards POP/FL issues in general (in this case the sum of "a1" and "a2") which was labelled as "A", the maximum possible score of 80 and the minimum possible score of 20 were added and averaged to determine the expected mean. Thus, a score equal and above 50 point was judged to show favourable attitude and below this point was considered unfavourable attitude. As far as the degree of favourability and unfavourability of POP/FL issues were concerned, taking the middle point between the mean and the maximum possible score, and the mean and the minimum possible point, scores equal and above 65 were judged as highly favourable and scores equal and below 35 were considered as highly unfavourable.

3.3.3. Rating Scale

Another instrument was constructed to measure the students' competencies in POP/FL skills. The scale consisted of 12 items which involve activities that could be exercised by the students in their daily life as well as in their learning process.



Each item had 4 alternatives. A value of 4 was assigned for an activity that occurs always, 3 often, 2 sometimes, and 1 never (See appendix A part four). The rating scale had a reliability of 0.80, which was estimated by KR20 method. In addition to this, comments and judgements from graduate students of the department of Psychology were considered in constructing the final scale.

The rating scale was used to examine the level of POP/FL practice of the students during the teaching-learning process in-and-out of the classroom. In this case, the highest possible score was 48 and the lowest being 12. A score of 30.0 (which is the average) and above was considered as judgements showing high practice and a score below this point was considered as indicating low practice of POP/FL by the individual student.

Finally, to further get comments of the respondents on POP/FLE in their colleges and POP/FL issues in general an open-ended question was included (See appendix A part five). The purpose was to get much information that could reinforce the responses of the students collected through various data gathering instruments.

3.3.4. Interview

To gather information on how the integrating process of POP/FLE took place during the process of the curriculum design of the teachers education, Curriculum design specialists were

interviewed. In this case, purposeful sampling method was employed to select sample participants. Due to lack of access to get all of the participants who came from regional offices and colleges, all participants were selected from Kotebe College of Teachers Education. Structured interview was conducted with members of different panels (See appendix C). Besides, all heads of the eight departments (i.e. Amharic, Biology, Chemistry, English, Geography, History, Mathematics and Physics) in both colleges were interviewed. Department heads were preferred to be interviewed, in the assumption that they could have chance to know about the whole process of education in their departments than individual instructor. A written outline was prepared to elicit the needed information (See appendix B).

3.3.5. Content Analysis

To determine the extent to which POP/FL issues were integrated in the first year first semester courses of the colleges, objectives and contents in each subject catalogue and course outlines were analysed. In this procedure, the total objectives, contents and time allotment of the courses in each department were counted. Then objectives and contents, that are related to POP/FL issues and the time allocated to these were counted and calculated to determine their proportion out of the total. Such analysis could help

to make comparison between departments and examine the status of POP/FLE in each department.

3.4. Administration of the Instruments.

A questionnaire which consists of 5 items bio-data, 5 items supplementary personal information, 20 achievement test items, 20 items of attitude inventory, 12 items rating scale and a one item concerned with general comment was designed to collect data from the students (see appendix A).

A pilot study was conducted in Kotebe College of Teachers Education. The result of which provided information on the reliability of the tests, the possible ethnic and religious composition of the students, and enabled to restate some ambiguous items in the instrument. After the final questionnaire was prepared, code number was given to each questionnaire at the back side of the last page so that it could be possible to identify those individuals during the two test administrations. This process was made for the comparison of KAP result of individuals in the pre-and post test that enables to see the effect of POP/FLE in the courses of the first semester. The pre-and-post tests were administered at the beginning of the first and second semesters respectively.

Prior to the administration of the instrument, the sample students were summoned to a classroom with a maximum size of 25. Besides, to minimise generosity error, the students were

instructed on the value of their accurate and honest responses. They were also told not to leave any item unfilled. With the help of assistants who were selected from instructors, the pre-as well as the post-tests were administered under a strict exam-like condition. The same questionnaire for the same sample students was administered. Though there was no time limit which was fixed before administration, the maximum time needed to complete the questionnaire was two hours in both administered tests.

Interviews were conducted with 21 individuals. Sixteen department heads (eight in each College) were interviewed and their responses were collected in separate sheet of paper, and with five instructors at Kotebe College of Teachers Education who participated in designing the curriculum of different departments. All interviews helped to reinforce the information gathered from the students. All the interviews were made after the post-test to allow the interviewee see the effect of the courses during implementing the Curriculum.

3.5. Method of Data Analysis

Since the test was administered in exam-like condition, all questionnaires were returned and checked for their accuracy and completeness during both test administrations. Each part of the data; i.e., the knowledge test, attitude inventory, and the rating, was considered separately during the process of data organisation. The bio data, i.e. sex, religion, ethnic group, residential background, marital status, College,

department and exposure to previous knowledge were considered and coded as independent variables against which the KAP level of the students was assessed.

Score on each measure of knowledge test, attitude inventory and rating scale for each individual respondent was recorded and entered into computer. The following statistical methods were used in analysing the data.

1. Percentage was used:

- to summarise the raw data
- to show the ratio of students who scored above and below sample mean score of knowledge test,
- to indicate the percentage share of students who have favourable and unfavourable attitudes
- to show students' judgement towards their POP/FL experience and
- to indicate the proportion of objectives, contents and time allocated to POP/FL issues in each department

2. Mean was used to identify the students' average scores with respect to each dependent variable and to determine the extent of their variations with respect to independent variables.

3. Analysis of Variance (ANOVA) and t-tests were employed to determine whether there are statistically

significant difference in the KAP of the students with respect to their biographic and background data. The test significance was set out at alpha value of 0.05.

4. Intercorrelation matrix was established to show the relationship among the students' POP/FL KAP

CHAPTER FOUR

4. Analysis and Interpretation of Data

The main purpose of this study was to examine the KAP level of students in teachers' colleges towards POP/FL issues and the status of POP/FLE in different courses. It also tried to scrutinise the students' knowledge level acquired from the courses in their respective colleges. Moreover, the study was intended to investigate whether POP/FL knowledge is accompanied by attitude change in general, and behavioural practices in particular, as a result of taking the courses.

Towards this end, data were collected in relation to three major themes: I) KAP (including knowledge, feeling, and behaviour), ii) subjects' characteristics (including demographic variables) and iii) contents of the courses. The results were analysed taking demographic characteristics of subjects as independent variables; and knowledge, attitude, and practice as dependent variables. Following this, the contents of the first year first semester courses were analysed to see whether they covered POP/FLE, and if they do, how they did it.

In order to do all the above, pre-test results obtained from a pilot study the researcher conducted were analysed to examine whether there existed differences in the variables treated in the study, i.e., between the two colleges,

different departments, males and females, religious and ethnic groups as well as residential background, marital status and exposure to previous knowledge.

The pre-test results thus analysed were compared with post-test results in order to see the effect of the courses on the trainee teachers' KAP after the training.

4..1. POP/FL Knowledge of the Students: The Pilot Study Results

As stated earlier in the methodology part of this study the questionnaire of "Miller-Fisk Sexual knowledge" which was designed by Gough (1974) was adapted and administered to the students. Based on their achievement scores, variation in their knowledge was found with respect to college, sex, religion, residential background and previous exposure to POP/FL information. Means and standard deviations computed from the questionnaire results are given in Table 1.



Table 1. Means and Standard Deviations of POP/FL
Knowledge Test Score of the Students

Variables	Value level	Mean	Standard Deviation	Cases
For the target Population		10.6683	2.8030	154
College	Awassa	11.7375	2.6707	80
	Gonder	9.5135	2.4786	74
Sex	male	10.9516	2.7315	124
	Female	9.5000	2.8376	30
Religion	Orthodox	10.6667	2.7819	75
	Catholic	12.3846	2.1031	13
	Protestant	10.9737	2.8710	38
	Muslim	9.4643	2.6455	28
Residential Background	Urban	11.0000	2.8386	105
	Rural	9.9592	2.6137	49
Previous Knowledge	Acquired	12.2347	2.0041	99
	Not Acquired	7.9091	1.6697	55

Among the variables, only those in which significant differences among the respondents were observed have been selected and included in the table. Such variables as department, ethnic group, and marital status were not presented because the students did not show any statistically significant variations in them. For instance, with respect to marital status, all subjects were found to be single.

The mean score of the target population, i.e. 10.67, was taken as a standard to categorise students into two groups.

Students who scored below it were considered below average while those with scores equal to or above it were taken as above average. The results are summarised in Table 2.

Table 2. Proportion of Students who scored Above and Below the Grand Mean in the Knowledge Test

Knowledge Level			
Above Average		Below Average	
n	%	n	%
83	53.89	71	46.11

Table 2 revealed that while 53.89% of the sampled students have passed the test 46.11% of them were below the grand mean in their knowledge of POP/FL issues. In this test, though more than half of the students scored above average, the proportion of students who scored below average was not also as such far from half of the percentage of the sampled Population.

To see whether there were differences among the students with respect to the variables, a simple (or one way) Analysis of Variance (ANOVA) was employed. Table 3 shows the results of the ANOVA for the knowledge test among the two colleges.

Table 3. ANOVA Summary for POP/FL knowledge Test By
Type of College

Source	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance levels
Between Colleges	190.1364	1	190.1364	28.5588	0.0000
Within Colleges	1011.9740	152	6.6577		

Eta = 0.3977

Eta squared = 0.1582

As it was presented in Table 1, students in the two colleges showed variation in their mean scores on POP/FL knowledge. The mean scores on the knowledge test were 11.74 for Awassa and 9.51 for Gonder. The ANOVA in Table 3 reveals that the difference between the mean knowledge test scores of the two colleges was statistically significant ($F_{1,152} = 28.56$, $P < 0.0001$) and suggested that students in Awassa seem to have better knowledge of POP/FL than those in Gonder. College difference accounts for 15.82% of the variance of POP/FL knowledge of the students. Such a discrepancy between the students' knowledge in the two colleges could be explained in the differences in the source of POP/FL information. Following is a table displaying sources of knowledge identified by the respondents.

Table 4. Source of POP/FL Information of the students
by type of College

Source of Information	Colleges			
	Awassa		Gonder	
	n	%	n	%
High School	5	8.33	13	33.33
Family	-	-	-	-
Friends	4	6.67	8	20.51
Family Guidance Association	18	30.00	-	-
Medical Persons	7	11.67	-	-
Mass Media	26	43.33	11	28.21
Training and Seminar	-	-	-	-
Religious Institutions	-	-	7	17.95
Others	-	-	-	-
Total	60	100	39	100

Out of a sample of 154 students, only 99 reported that they have had previous knowledge. When the respondents were asked to mention their source of POP/FL information, mass media appeared to be the major source, as it is mentioned by 43.33% of the sample population in Awassa. The Family Guidance Association of Ethiopia (FGAE) has been said to be the second major source favoured by 30% of the respondents followed by medical personnel, which was mentioned by 11.67% of the students in Awassa College as their source of POP/FL information. Meanwhile, the sources mentioned by students in Gonder College in order of their importance were high school (33.33%), mass media (28.21), friends (20.51%) and religious institutes (17.95%). In both cases family was not mentioned as source of information. This might be attributed, as

Mekonnen (1991) said, to the reluctance of parents and adolescents to discuss sexual matters.

As it was mentioned, students in Awassa seem to have more access to the Information, Education and Communication (IEC) program of the FGAE and the mass media programs in the national service of Radio Ethiopia specially "Tenachin" (Our Health) and *Mahiberawi Nuro* (Social life). These sources are expected to offer direct lessons concerning POP/FL issues whereas friends and high schools may not offer an organised set of POP/FL knowledge. Furthermore, as reported by the instructors in Awassa, there were occasional programs on health and family life issues organised by FGAE and the Red Cross branches at Awassa. These organisations arrange video films and posters at least three to four times a year in higher educational institutions and some selected high schools. In general, while the activities of these organisations were mentioned by most students in Awassa, it was not mentioned by any student in Gonder College. Based on these facts, we can say that students in Awassa seem to have better opportunity to acquire POP/FL knowledge from different sources. This fact was supported by the presence of relationship among previous knowledge and high scores on the knowledge test ($\eta^2=0.5507$) as presented in Table 5.



Table 5. ANOVA Summary for POP/FL Knowledge Test By
Level of Previous Knowledge of the students.

Source	sum of squares	Degree of Freedom	Mean Square	F-ratio	Sig. Level
Between groups	661.9629	1	330.9814	92.5269	0.000
Within groups	540.1475	152	3.5771		

Eta = 0.7421

Eta squared = 0.5507

As it was shown in Table 1, the mean score (which is 12.23) of those students who acquired previous knowledge of POP/FL issues from different sources was greater than the mean score (which is 7.91) for those who have not acquired previous knowledge. As mentioned above, 99 of the 154 respondents (64.29%) have reported that they have had previous knowledge and the difference was significant ($F_{1,152} = 92.5269$, $P < 0.0001$). This explained the fact that students with previous knowledge scored more on knowledge test than students who have not had as much previous knowledge. In fact, 55.07% of knowledge achievement variance is thought to have been caused by previous knowledge. This is in agreement with Bogue's (1972) study that stated knowledge as the power to regulate fertility among a given group of people. Therefore, it seems that there is correlation between previous knowledge of students about contraceptive methods and their achievement.

Furthermore, students' knowledge differences with respect to their sex were examined. As it was indicated in Table 1, male students achieved a mean of 10.95 whereas females scored an average of 9.50. The difference was statistically significant ($F_{1,152} = 6.7207$, $P < 0.01$). See Table 6 below.

Table 6. ANOVA Summary for POP/FL knowledge Test By Sex

Source	sum of squares	Degree of Freedom	Mean Square	F-ratio	Significance Level
Between sexes	50.9007	1	50.9007	6.7207	0.0105
Within sexes	1151.2097	152	7.5737		

Eta = 0.2058

Eta squared = 0.0423

Table 6 indicates that male students have better POP/FL knowledge than female students. It also shows that 4.23% of achievement variance was related to sex differences. Though Pai Panadiker, Bishnoi and Sharma (1978) found that females have higher knowledge of family planning, the reverse is found to be the case in this study.

Achievement difference between sex groups might be due to different factors. Among them is that cultural influence in most of Ethiopian society hinders girls from discussing sex related matters. In most cases, female students are not willing to talk about contraceptives among their peer groups. On the other hand, male students might be interested in discussing sex related matters with their friends. In most Ethiopian society, males make decisions concerning family planning. Similarly, as Jersild (1963) contended, males in their adolescent years are interested in sex matters while females are more interested in fashions. One can therefore say that the existence of achievement difference between sex groups might be due to traditional as well as psychological

factors that have differing effect on discussing sex related matters among boys and girls.

Similar differences have been detected between knowledge achievements of different religious groups. Catholic students achieved a mean of 12.38, Protestants and Orthodox Christians scored a mean of 10.97 and 10.67, respectively. Muslim students, on the other hand, have scored below the Population mean with a score of 9.46 (See Table 1).

Table 7. ANOVA Summary for POP/FL knowledge Test by Religion.

Source	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance level
Between religions	82.4288	3	27.4763	3.6809	0.0135
Within religions	1119.6816	150	7.4645		

Eta = 0.2619

Eta squared = 0.0686

The ANOVA table indicates that the difference between the means of the four religious groups regarding knowledge test was statistically significant.

To identify religious groups that differed significantly from the others, Scheffe's multiple comparison technique was used. Results portray that the difference was statistically significant between Catholics and Muslims. The Catholics scored much higher than the others and the Muslims' scored the least. The Other comparisons did not show any significant variation (see Table 8).

Table 8. Multiple Comparisons of Means Using Scheffe's Method for the Four Religious Groups.

Comparison	F-Value
Orthodox Vs Catholics	4.3801 (ns)
Orthodox VS Protestant	0. 318 (ns)
Orthodox Vs Muslim	3.949 (ns)
Catholics Vs Protestant	2.585 (ns)
Catholic Vs Muslim	18.418*
Protestant Vs Muslim	4.920 (ns)

*P< 0.01 ns=not significant at $\alpha =0.05$

Though Manisoff (1970) mentioned that there was no difference in family planning ideas between different religious groups, the findings of this study seem to be consistent with the findings by Seyoum Gebre Selassie (1991). From among the Christian groups, Catholic students appeared to have better knowledge than Muslim students. In general, Muslims achieved lower than their Christian counterparts. This might be due to the fact that Islam permits Muslims to contract up to four marriages. In this regard Siddh (1972) has said:

The object of marriage in Islam is not only to ensure continuity of the lineage but also to increase the followers of Islam. In *shariat* (Islamic law) it is said that when a servant of Allah marries he perfects half of his religion (p.146).

This motive of marriage among Muslims may lead to a reluctance towards accepting family planning at least in terms of regulating the number of children. It seems that Muslim students acquired this religious value of Islam which led them to give less attention to POP/FL knowledge.

When achievement results were assessed from the view point of residential background, students who reported that they lived, for most part of their life, in urban settings seem to have better knowledge as compared to those who reported that they dwell in rural areas for a long time

This difference due to residential background was found to be statistically significant ($F_{1,152} = 4.72$, $P < 0.05$).

Table 9. ANOVA Summary for POP/FL Knowledge Test by

Residential Background

Source	Sum of scores	Degree of freedom	Mean square	F-ratio	Significance level
Between groups	36.1920	1	36.1920	4.7183	0.0314
Within groups	1165.9184	152	7.6705		

Eta = 0.1735

Eta squared = 0.0301

As several research studies, such as those by Rodriguez and Cleland (1984), United Nations Population Division (1983) and World Fertility survey (1983) revealed, students who mostly

lived in urban centres were found to have better POP/FL knowledge than rural dwellers. The difference might have occurred due to the fact that urban centres give more opportunity for receiving POP/FL knowledge through formal as well as non formal ways. For instance, regarding mass media, the usual medium in rural settings is radio, while in urban areas, apart from radio, there are various forms of visual exposures and reading materials. That means the dissemination of POP/FL information in urban centres, which might offer opportunities to students in urban centres to take part in receiving informal education, seems to be much higher than rural areas.

Furthermore, since in urban centres settlements are usually clustered as opposed to the rural settlement which are dispersed, there might be high interaction of people which enable them to share new ideas and information. Similar to the finding in this study, Rawson and Geoffery (1972) had found that people who were born in urban centres have more knowledge of POP/FL than those who were born in rural areas.

Other variables i.e. department difference, marital status and ethnic background showed no statistically significant variations among the students.

4.2. Students' POP/FL Attitudes

According to Kinsay (1979), Borden and Scheltino (1975), and Alaimo and Doran (1980), individuals' acquisition of certain knowledge alone does not guarantee that he/she would act accordingly. Change of attitudes and values should develop to put certain knowledge into action. Similarly, as the findings by Bogue (1972) revealed, knowledge of family planning methods need not necessarily indicate a positive attitude or a strong motivation to practice it.

Thus, this study has attempted to assess the POP/FL attitudes of the students in general, and their attitudes of POP/FL problems and POP/FL education in particular. In so doing, attitude was divided into two subscales, namely; "a1" and "a2". The main focus of the first subscale (a1) was on the attitude of the students towards the existing Population and family life problem. The second subscale (a2) focused on the attitude of the students towards the inclusion of Population

and family life education in the formal as well as informal curricula.

For each subscale, the maximum possible score was 40 indicating the most favourable attitude of students towards POP/FL problems and education, while the minimum possible score was 10 indicating least favourable attitude. Based on this range of score, the expected attitude mean score was determined to be 25. And taking the median point between the mean and the maximum possible score, scores from 25 to 32.5 were considered as showing favourable attitude and scores from 33.0 to 40 points as showing very favourable attitudes. Similarly, scores from 10 to 17.5 were considered as showing very unfavourable, and scores from 18 to 24.5 as showing unfavourable attitude.

The maximum possible score for the overall attitude scale (which is designated as "A") was 80 points representing the most favourable attitude and the minimum possible score was 20 points indicating the least favourable attitude. The expected average score was 50. Taking the median point between the mean

and the maximum possible score and the mean and the minimum possible score; a score of 65 and above was considered as very encouraging, scores from 50 to 64 as encouraging, scores from 35 to 49 as discouraging, and scores from 10 to 34 as very discouraging. Table 10 shows a summary attitude score of the students.

Table 10. Attitudes of Students Towards POP/FL Issues

A T T I T U D E																									
		Attitude towards POP/FL Problems (a1)								Attitude towards POP/FL Education (a2)								Overall attitude towards POP/FL Issues in genral (A)							
		Very Encourage		Encouraging		Discouraging		Very Discouraging		Very Encouraging		Encouraging		Discouraging		Very Discouraging		Very Encouraging		Encouraging		Discouraging		Very Discouraging	
College		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Awassa N=80		28	35.0	44	55.0	6	7.5	2	2.5	43	53.75	34	42.5	3	3.75	-	-	30	47.5	41	51.25	1	1.25	-	-
Gonder N=74		22	29.73	36	48.65	16	21.62	-	-	46	62.16	24	32.43	4	5.41	-	-	38	40.54	41	55.41	3	4.05	-	-
Total N=154		50	32.47	80	51.95	22	14.29	2	1.29	89	57.79	58	37.66	7	4.55	-	-	68	44.16	82	53.25	4	2.59	-	-

As it is indicated in the table, out of 154 respondents, 130 or 84.42% of the students seem to have favourable attitude, while only 24 or 5.58% show unfavourable attitude towards POP/FL problems (a1). Besides, 147 or 95.45% seem to have favourable attitude towards POP/FLE (a2). As observed from their specific responses, students have recommended POP/FLE to be offered as a separate subject in their courses. Likewise, most of the instructors suggested that POP/FLE to be given as a separate course giving much emphasis to the issues it must cover. They further agreed that POP/FLE should become one of the burning issues that must be included in the Ethiopian curriculum. When the attitude of students towards POP/FL issues in general (A) is assessed, 150 or 97.40% of them showed positive attitude while only 4 or 2.6% of the students seem to have unfavourable attitude.

When we consider the colleges separately, it can be observed that more students in Awassa College seem to have positive attitude towards POP/FL Problem (a1) compared to the students in Gonder. That is, while 72 or 90% of the students in Awassa showed favourable attitude towards POP/FL problems

(a1), only 58 or 79.38% of the students in Gonder showed positive attitude towards POP/FL problems (a1). Meanwhile, nearly all the students in both colleges appear to have positive inclination towards POP/FL education (a2) i.e. 77 or 96.25% and 70 or 94.59% students in Awassa and Gonder, respectively.

However, it seems that there exists difference among the colleges regarding the students' attitude as far as the percentages are concerned (see Table 10). Just to have a clear picture of the situation, the means and standard deviations of the colleges based on different variables were computed in Table 11.

Table 11. Means and Standard Deviations of POP/FL Attitude Scores With Respect to Different Variables.

Variables		POP/FL Problem (a1)		POP/FLE (a2)		Overall attitude towards POP/FL issues in general (	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
College	Awassa N=80	*33.1250	4.0950	*30.4625	4.8312	63.6000	6.2351
	Gonder N=74	*29.3378	4.9249	*33.0541	4.0743	62.5270	6.8391
Religion	Orthodox N=75	*30.2533	4.7536	32.1200	4.6265	62.5200	6.6726
	Catholic N=13	*34.8462	5.3361	30.0769	3.8829	64.9231	5.7367
	Protestant N=38	*32.7632	4.1488	30.8421	5.1335	63.6053	6.9886
	Muslim N=28	*30.5000	4.9103	32.5357	4.2118	63.0357	5.9472
Residential Background	Urban N = 105	*31.8762	4.8866	31.7143	4.8133	63.6857	6.4871
	Rural N=49	*30.0816	4.6897	31.6939	4.3406	61.7959	6.5095
previous knowledge	Acquired N=99	*32.5204	4.4107	31.8367	4.5875	*64.4592	5.9986
	Not acquired N=55	*29.1636	5.0102	31.5636	4.8065	*60.7455	6.8265
For the total	Population N=154	*31.3052	4.8820	*31.7078	4.56539	*63.0844	6.5329

* Significant at $P < 0.05$

As indicated in Table 11, variations in the mean scores of students' attitude towards POP/FL problems (a1) have been shown among colleges, religious groups, residential background, and previous knowledge of the students. Similarly, variation in attitude towards POP/FLE (a2) was found between the colleges.

To determine whether the differences are significant or not, analysis of variance for each variable (i.e. college, religious group, residential background and previous knowledge) and each case (a1, a2 and A) was employed.

Table 12. ANOVA Summary for the Attitude of POP/FL problem By college.

Source of Variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Sign. level
Between Colleges	551.3518	1	551.3518	27.0750	0.000
Within Collages	3095.3041	152	20.3638		

Eta = 0.3888

Eta squared = 0.1512

Students at Awassa college seem to have better attitude towards POP/FL problem (a1) than students at Gonder College

($F_{1,152} = 27.08$, $P < 0.0001$). This difference might be attributed to the fact that students enrolled in Awassa college are recruited from areas of relatively high Population densities in the country. For instance, as it was mentioned in Population and Development report (1996) the estimated crude Population density of the Southern Nation Nationality and Peoples Regional State was 102.10 persons/km² in 1995. Besides, the North Omo, Gurage, Hadiya, Kembata, Alaba and Timbaro zonal administrations are reported as having the highest Population densities in the country. This prevalence of Population explosion could constantly remind the students at Awassa of the concomitant social problems. This, in turn, could have an influence on their attitudes. On the other hand, the population density of the Amhara regional government is 81.7 people/ Km². This may create less observable a problem that may be too light to influence the attitude of the students in Gonder. Moreover, the Information, Education and Communication (IEC) activities of such organisations as FGAE have been relatively more frequent and direct at Awassa and its surrounding than in Gonder.

Table 13 ANOVA Summary for the Attitude of POP/FLE by
College.

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance level
Between Colleges	258.1794	1	258.1794	12.8428	0.0005
Within Colleges	3055.6713	152	20.1031		

Eta = 0.2791

Eta Squared = 0.0779

As it is shown in Table 13, students at Gonder College have more favourable attitude towards POP/FLE (a2) than students at Awassa ($F_{1,152} = 12.84$, $P < 0.001$). The result is statistically significant, and the college difference contributes 7.79% of the variance of the attitudes towards POP/FLE of the students. The reason for this inclination of students in Gonder college might be attributed to lack of information about POP/FLE from other sources such as non government organisations (NGOs) other than their schools. Therefore, students in Gonder college seem to be eager to get POP/FLE.

Attitude difference was also found in relation to the religion of the respondents. Catholics were found to have more favourable attitude towards POP/FL Problems (a1) followed by

Protestants. Muslims and Orthodox Christians have similar average scores both of which are below the overall mean (see Table 11). To find out whether the difference among the religious groups was significant or not ANOVA was used and the data are summarised in Table 14.

Table 14. ANOVA Summary for the Attitude of POP/FL problem by Religion

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Sign. level
Between Colleges	344.9084	3	114.9695	5.2231	0.0019
Within Colleges	3301.7479	150	22.0116		

Eta = 0.3076

Eta Squared = 0.094

Results, as indicated in Table 14, reveal that the F-test ($F_{3,150} = 5.22$, $P < 0.005$) indicated that the attitudinal difference of the students towards POP/FL problem (a1) with respect to their religion is statistically significant.

Though the research findings by Omran (1985) and Kassarde, John and Kirsten (1986) reported Catholicism and Islam as being major obstacles for family planning, in this study Catholics seem to have favourable attitude than the other denominations of Christianity. However, the finding of this study conforms to the finding of the study by Seyoum Gebre

Selassie (1991). Though the reasons for this difference have to be further investigated, it seems that there might exist doctrinal variation among these religious groups of procreation and parental responsibilities.

Residential background is also found to bring attitudinal variation in POP/FL problem (a1) among the students. Those who dwell in urban centres show more favourable attitude than those who reside in rural areas (see Table 11). The ANOVA summary is presented in Table 15.

Table 15. ANOVA Summary for the Attitude of POP/FL problem by Residential Background.

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance level
Between dwelling areas	107.5919	1	107.5919	4.6210	0.0332
Within dwelling areas	3539.0639	152	23.3833		

Eta = 0.1718

Eta squared = 0.0295

As can be seen in Table 15, the F-test ($F_{1,152} = 4.62$, $P < 0.05$) indicated that students who for most of their life lived in urban centres varied significantly in their attitudes on POP/FL problems from those who lived long in rural centres.

Similar result was found by Krisha (1968). This difference might be related to, as Debesai (1989) said, the belief of most rural cultures that considers additional child as an asset for that family. This cultural value might be reflected among the students who lived most of their time in rural areas. Again, the rural areas are unable to get information from various media except in some cases from radio, to consider population issues seriously. Differences in attitudes towards POP/FLE (a2) and the overall POP/FL issues in general (A) between the two residential backgrounds were not found significant.

On the other hand, significant variations among students have been obtained from the test on POP/FL knowledge. Students who have acquired POP/FL knowledge prior to their entrance to college seem to have better attitude on POP/FL problem (a1) and POP/FL issue in general (A) than those who have not acquired POP/FL knowledge prior to their college enrolment.

Table 16. ANOVA Summary for the Attitude of POP/FL problem By Previous Knowledge.

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Sig. level
Between groups	398.6694	1	199.3347	9.2671	0.0002
Within groups	3247.9865	152	21.5098		

Eta = 0.3306

Eta squared = 0.1093

The F-test, as summarised in Table 16, indicated that students with previous knowledge seem to have more favourable attitude towards POP/FL problem (a1). Previous knowledge has contributed 10.93% of the variance in attitude towards POP/FL problem (a1). One can conclude from this that students' exposure to IEC seem to correlate with their positive feeling towards POP/FL problem.

Table 17. ANOVA Summary for the Attitude of POP/FL issues in general By previous knowledge.

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance level
Between groups	523.1295	1	261.5647	6.5753	0.0018
Within groups	6006.7731	152	39.7800		

Eta = 0.0288

Eta squared = 0.0801

The F-test indicated ($F_{1,152} = 6.58$, $P < 0.001$) the relationship between previous knowledge of the students and their favourable attitude towards the overall POP/FL issues in general (A). That means, those students who have acquired POP/FL knowledge prior to their enrolment are likely to have positive attitude towards it.

4.3 Students' POP/FL Practice.

Sound knowledge and positive attitude towards POP/FL issues are expected to be changed into action. Therefore, the researcher found it imperative to check students' level of POP/FL practice. Students were thus asked to rate the occurrences of 12 listed activities in their classroom learning process as well as their every day life (see Appendix A part four).

The ratings on all activities were expected to yield a maximum score of 48 and a minimum possible score of 12 with an average score of 30.0 points. Then taking the medium point between the maximum possible score and the mean, and the median points between the mean and the minimum possible point, a cut-off score on the scale was established as follows:

Scores equal to and greater than 139.0 taken as always,

Scores equal to and greater than 30.0 and less than 39.0 as often,

Scores equal to and greater than 21.0 and less than 30.0 as sometime and scores below 21.0 as never.

Based on these points the summary of the ratings of the respondents are shown below.

Table 18. Students Judgements of their POP/FL Practice

		Frequency of Occurrence							
		Always		Often		Sometimes		Never	
College		n	%	n	%	n	%	n	%
Awassa	N= 80	5	6.25	15	18.75	40	50.0	20	25.0
Gonder	N = 74	-	-	12	16.22	38	51.35	24	32.43
Total	N = 154	5	3.25	27	17.53	78	50.65	44	28.57

As it is shown in the table, 110 or 71.42% of the students appeared to have practised most of the activities. However, there was variation in their activities. For instance, only 32 or 20.78% seem to practice it adequately, 78 or 50.65% tend to show inadequate practice, i.e., they practice POP/FL sometimes. The rest 44 or 28.57% appear that they never practice it. Those who reported that they never practice seem

to have fear of explaining their sexual and contraceptive practice thinking that it appears taboo to them. As clearly indicated in Table 19 below, variation in practice among the respondents is found only as a function of previous knowledge.

Table 19. ANOVA Summary for POP/FL practice By Previous knowledge.

Source of variation	Sum of squares	Degree of freedom	Mean square	F-ratio	Significance level
Between groups	206.5996	1	103.2998	5.8139	0.0037
Within group	2682.9393	152	17.7678		

Eta = 0.2674

Eta squared = 0.0715

The table shows the existence of correlation between the students' previous knowledge and their practice of POP/FL practices.

Table 19 reveals that the difference in the practice of POP/FL among those who acquired previous knowledge and those who did not is statistically significant ($F_{1,152} = 5.81$, $P < 0.005$). Previous knowledge of students accounts for 7.15 % of the variance of the practice of the students.

4.4. The Relationship Between Knowledge, Attitude and Practice of Students.

One of the objectives of this study was investigating relationships among the students' knowledge, attitude and Practice. To illustrate the result of the investigation in this, an intercorrelation matrix is presented in Table 20.

Table 20. Intercorrelations of knowledge, Attitude and Practice of the Students.

	knowledge	a1	a2	A	Practice
knowledge	1.00				
a1	*0.3933	1.0000			
a2	0.1013	0.0383	1.0000		
A	*0.3556	*0.7033	*0.6728	1.0000	
Practice	*0.3339	0.0459	0.0726	0.0781	1.0000

*Significant at $P < 0.05$

As presented in Table 20, knowledge shows positive relationship with the students' attitude towards POP/FL problem (a1) ($r = 0.39$, $P < 0.05$), POP/FL issues in general (A) ($r = 0.35$, $P < 0.05$) and Practice ($r = 0.33$, $P < 0.05$). There was no significant relationship between knowledge and attitude of the students towards POP/FL education (a2).

Though strong relationship is found between their general attitude of POP/FL issue (A) of the students and their attitudes towards POP/FL Problem (a1) and POP/FLE (a2) (i.e. $r=0.70$, $p<0.05$ and $r=0.67$, $P<0.05$ respectively) no significant relationship was found between practice and any level of attitude. In this line, this researcher agrees with the contention of several studies such as Sharma (1987), Bogue (1972) which stated that knowledge of family planning method need not necessarily indicate a strong motivation to practice it.

4.5. The status of POP/FLE in Various Courses.

About 23 different courses are offered to first year students during the first semester of their first year. The course catalogues and course contents are assessed to see the proportion of objectives, contents and time allocated to POP/FL issues in each department. The summary is presented in Table 21.

Table 21. Proportion of POP/FLE Related Objectives, Contents and Time Allocated in each Department

Department	Objective			Content			Time Allocated		
	total	POP/FLE related	%	Total	Related to POP/FLE	%	Total	Related to POP/FLE	%
Amharic	22	8	36.36	39	19	48.72	320	146	45.62
Biology	30	10	33.33	45	12	26.67	288	90	31.25
Chemistry	26	6	23.08	45	11	24.44	320	76	23.75
English	30	13	43.33	41	19	46.34	304	160	52.63
Geography	31	15	48.39	42	22	52.38	304	143	47.04
History	20	13	65.00	54	34	62.96	304	190	62.50
Mathematic	32	12	37.50	39	13	33.33	288	105	36.46
Physics	31	12	38.71	42	9	21.43	288	105	36.46

As indicated in the table, significant proportion of the objectives, contents and time devoted to POP/FL related issues exist in all departments of the first year first semester courses. As far as objectives are concerned, the highest proportion is in History department which is 65% followed by 48.39% in Geography and 4.33% in the English department.

Concerning the contents of the total courses in each department, 62.96% of the content of the course in History department, 52.38% of the Geography, 48.72% of Amharic and 46.34% of English departments deal with POP/FL related topics. Besides, common and professional courses such as Civ 101 (Introduction to Civics), Sost 101 (Introduction to Social Studies), Enla 101 (Basic English I), EPSy 111 (Education Psychology) and Bio 101 (General Biology) covered more objectives and content of POP/FL related topics in the departments where they are offered. However, while Enla 101 and Epsy 111 are offered to all departments, Civ 101 and Sost 101 are offered only in language department. On the other hand, Bio 101 was given only to the Biology and Chemistry departments.

4.6 Effect of the Courses Upon the KAP of the Students

The major objective of this study is assessing whether there is correlation between the students' knowledge, attitude and Practice (KAP) and the courses offered in the first semester of the first year. To do this, the two means, i.e., the means for the pre-and post-test are compared using a t-test. The results are presented below.

4.6.1 Change in the Knowledge of the Students.

Table 22. Mean Comparison for Pre- and Post-tests on Knowledge.

	Knowledge pre-test	Knowledge post-test	t-test	P-value
Mean	10.6688	11.7338	3.415	< 0.001
Variance	7.8569	7.4123		

As could be gathered from the table, change in the students on POP/FL knowledge is observed ($t=3.415$, $P<0.001$), suggesting the existence of correlation between the students' knowledge on POP/FL and the courses offered. While the whole sample Population of 154 students have reported that they didn't get any POP/FL knowledge from their college education during the pre-test, 42 of them have mentioned their exposure to POP/FL

knowledge in their college courses during the post-test. Besides, out of those 55 students who mentioned that they didn't have previous exposure to POP/FL knowledge in the first test administration (see Table 1), 28 of them have reported that they were offered POP/FL knowledge from their college education during the second test.

This being as it is, most of the students claimed the absence of proper courses which deliberately focus on POP/FLE, except the inclusion of few ideas in some subjects. They added that even though there are limited topics of POP/FL issues in different subject courses, they are insufficient to develop knowledge that can bring about change. Besides, though most of the department heads commended the provision of POP/FLE as a separate subject, it is also indicated that there is lack of professionals in POP/FLE to offer the course. Moreover, they mentioned that except the directors of both colleges, there is no one who even have participated in POP/FLE workshops and seminars. This was because when those colleges were reorganised during their transition from TTIs to CTEs, most of the previous instructors who participated in POP/FLE seminars and workshops have been transferred to high schools or to educational offices and replaced by new ones. All the same, the change of knowledge that was observed during the

knowledge of POP/FLE during the first semester courses due to differences in their departments.

To look into the situation more deeply, curriculum designers of different subjects of the colleges of Teacher Education (CTE) were asked about the process of integration of POP/FLE in different subjects. And in response, they said that no attempt was made to integrate POP/FLE in any subject, because the Institute of Curriculum Development and Research (ICDR) has forwarded the idea of integrating POP/FLE to the curriculum designing committee after they have finished their task of course designing. Furthermore, workshops and seminars about POP/FLE integration were conducted after the curriculum design was completed.

4.6.2 Change in the Attitude of the students.

Table 24 Mean comparison for Pre-and Post-test on Attitude Towards POP/FL problem.

	Pre-test (a1)	Post-test (a1)	t-test	P-value
Mean	31.3052	33.1884	3.452	< 0.001
Variance	23.8389	20.3896		

As indicated in Table 24, students tend to show significant attitudinal change towards POP/FL problem (a1) since they joined the college ($t = 3.45$, $P < 0.001$). The grand mean of

second test seems to correlate with the nature of some subjects such as Geography, History, Social studies, Civics and Educational psychology which share common ideas with POP/FLE.

Table 23 ANOVA Summary of POP/FLE Knowledge post-test By Type of Department.

Source of variation	Sum of squares	Degrees of freedom	Mean square	F-ratio	Sig. level
B e t w e e n Departments	108.9919	7	15.9703	2.2176	0.05
W i t h i n Departments	1025.0924	146	7.0212		

Variations in change of knowledge are observed among different departments ($F_{7,146} = 2.218$, $P < 0.05$) with the highest being the English department followed by Geography, History and Amharic departments. This might be due to the fact that the proportion of POP/FL related contents in these departments are relatively higher than other departments (see Table 21). Therefore, it seems that there is variation in POP/FL knowledge among the students depending on their departments. In other words, students seem to vary in their

31.31 during the first test has been increased to 33.19 in the post-test. This might be related, as the students mentioned, to their participation in different clubs of their colleges and to the opportunity offered by the college life that allows cultural exchange between different groups of people. This might have provided them with the chance to discuss about POP/FL problems that might have resulted in the respective attitudinal change.

Meanwhile, no change is found in the attitude of the students towards POP/FLE (a2) and the overall attitude change of the students towards POP/FL issues in general (A). Since the deliberate inclusion of POP/FLE in different subjects of the first year courses is minimal, the students intention of learning POP/FLE as a separate subject is not changed. In other words, they still have high inclination towards the provision of POP/FLE in their formal and informal curriculum.

Besides, absence of change in the general attitude of students might be due to lack of intensity of the inculcation of POP/FL knowledge to bring associated change, because most of the students reported that the colleges have difficulty in providing an organised set of knowledge concerning POP/FLE.

Furthermore, as almost all heads of department reported, instructors do not give attention to POP/FLE unless the nature of the subjects they teach forces them to deal with it. This is due to lack of material related to POP/FL issues and the problem of integrating the subject into the courses they teach. As they did not took any course or seminar or workshop on how to integrate it, they were not in a position to initiate effective change in their students. And because of these facts, they have not prepared their lessons in a way that could bring about attitude change in their students towards POP/FL issues.

4.6.3. change in the Practice of the Students

Table 25. Mean Comparison for Pre-and Post-test on Practice

	Practice Pre-test	Practice post-test	t-test	P-value
Mean	27.8117	29.9740	3.952	<0.0001
Variance	18.8859	26.5091		

Students show highly significant change ($t=3.95$, $P<0.0001$) in their POP/FL practice. As the students reported, the change in practice was correlated with the students' participation in different co-curricular clubs that involve performing activities that are related to POP/FLE. These

activities include tree plantation, project work in group, data collecting and reporting, etc. Besides, the students' familiarity to each other might have helped to discuss some POP/FL ideas with their classmates as well as dormmates while performing their assignments and homework for the subjects such as Geography, Social studies, Civics and Educational Psychology.

Meanwhile, out of the 12 activities mentioned in the rating scale some three (item 8,10,11) represent behavioural intentions. That is, if they are reported in the post-test by most subjects, such activities have less opportunity to be executed. And the rest nine items could be performed in the setting where the subjects are found. However, in the post-test, the behavioural intentions were rated highly by most subjects. Thus, since the students are on course work, and mostly pass their time in the school setting, the practice change in some instances might simply refer to students intentions.

CHAPTER FIVE

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The main focus of this study was assessing the status of POP/FLE in the curriculum of teachers education of some selected colleges in Ethiopia. The study also attempted to determine the KAP level of the students in these Colleges at the beginning of the courses. Further investigation was also made to identify the extent of objectives, contents and time allotment to POP/FL related issues in each department. Finally, the study has attempted to determine whether the courses helped the students to change their knowledge, attitudes and practices in POP/FLE.

Towards this end, related literature on POP/FL problems, POP/FLE and POP/FL issues in general were reviewed. Besides, research findings on the relationship of knowledge, attitude and practice, on KAP studies of POP/FL in Ethiopia, were assessed and studied to be familiar with what was done so far in relation to this issue.

Knowledge test (adapted from Miller-Fisk sexual knowledge questionnaire), attitude inventory (adapted from Kanungo scale of Measurements of attitude) and rating scale were employed

for data collection. After some modification was made, the instrument was tested for its reliability. Pre-and post-test was employed to collect data from sampled students regarding the relationship between their previous KAP level and the changes brought during the first year first semester courses. The same instrument was administered to the same samples in a standard testing situation with a maximum of only 25 students in a class. This was made to control the students from copying the responses each other. The sampled students consisted of those students who enrolled in 1996/97 academic year in Awassa and Gonder Colleges of Teacher Education. The subjects were 80 students from Awassa, and 74 from Gonder which sums up to 154 students. Besides, the course catalogue and outlines were analysed and interviews were conducted with each department head and sampled participants in the curriculum designing process of the teachers' colleges.

5.1. SUMMARY

The study generally indicated that half of the total sample students, i.e. 53.89% seem to have POP/FL knowledge and nearly the other half of the students (46.11%) appear to lack POP/FL knowledge. The students' knowledge was found to be correlated

with their college, sex, religious and residential background and their previous exposure to POP/FL information.

✓ Students in Awassa College showed better knowledge than those in Gonder as far as their achievement in the knowledge test was concerned. ✕ The study further revealed that male students have better POP/FL knowledge than female ones. Besides, religion-wise, as identified by Scheffe's multiple comparison technique, Catholic students seem to have the highest knowledge followed by the Protestants and the Orthodox church followers. The Muslims seem to have lower knowledge than their Christian counterparts. Furthermore, relationship was found between the students' knowledge and their residential background. In this case, students who reported as having lived for most of their lifetime in urban settings seem to have better knowledge as compared to those who reported to have dwelled in rural areas for a long period of time. Among the main sources of POP/FL information of the students, mass media, the IEC programme of NGO's such as FGAE and the Red Cross Society, and religious institutions were found to be significant.

With regard to attitudes, the vast majority of the students tend to show favourable attitude towards each sub scale in attitude i.e. POP/FL problem (a1), POP/FLE (a2), and the

overall attitude (A) towards POP/FL issues in general. In relation to the need for including POP/FLE content in the courses, almost all of the students and most of the department heads suggested POP/FLE to be offered as a separate subject. The attitude of the students could also show relationship with their religious group, residential background and college affiliations.

Students in Awassa College showed more favourable attitude towards one of the sub scales in attitude, i.e.; POP/FL problem (a1), students in Gonder College were found to show better attitude towards POP/FLE (a2). Likewise, while Catholic students seem to have more favourable attitude towards POP/FL problem (a1) followed by the Protestants and the Orthodox Church followers, Muslim students tended to show lower score in this respect. Furthermore, the attitude of the students who came from urban setting was more favourable than the students who live in rural areas for most of their lives.

Concerning the POP/FL practice of the students, 71.42% of the students seem to practice most of POP/FL activities. Their practice could show relationship with their exposure to previous POP/FL knowledge. Those who have prior information

about POP/FL seem to practice it more than those who weren't exposed to prior information.

Significant relationship was found between the students' knowledge and attitude towards POP/FL problem (a1), knowledge and the students' overall attitude (A) towards POP/FL issues in general, knowledge, and their practice. Moreover, relationship was also detected among the overall attitude (A), i.e., attitude towards POP/FL issue in general and the two attitude sub-scales [i.e. attitude towards POP/FL problem (a1) and attitude towards POP/FLE (a1)]

As regards to the status of POP/FLE in the first year first semester courses, it seems that significant proportion of objectives, contents and time were allocated to topics that are related to POP/FLE in each department. However, there was variation among departments in the proportions of objectives and contents the courses cover. The departments of History, Geography, Amharic, and English appear to devote most of their contents to POP/FL related topics when compared to other departments. Thus, though there was no equal opportunity of getting POP/FL knowledge among students of different departments, it could be inferred that the students were exposed, one way or the other, to some contents of POP/FLE. Meanwhile, no special topics on POP/FLE have been introduced

in the first year first semester courses. Besides, since the topics that are related to POP/FLE in each course are scattered, they only deal with the objective of attaining the aim of each subject rather than the objectives of inculcating POP/FLE in the students. In addition to this, lack of appropriate materials that deal with POP/FLE and trained manpower was reported as the major constraints to integrate the subject in different courses offered in the colleges.

In addition, the post-test revealed the existence of change in the students' POP/FL knowledge. This change of the students' achievement could show correlation to the departments where highest proportion of POP/FL related issues are found. In this case, students in the departments of English, Geography, History and Amharic were observed to show higher level of knowledge. This is consistent with the degree of emphasis in the objectives, content coverage and time allotment of POP/FLE in these departments. However, most of the students and department heads have mentioned the non-existence of deliberate inclusion of POP/FLE in their subjects. Furthermore, though the ICDR of MOE mentioned the integration of POP/FLE in some subjects of the teacher

colleges, participants in the curriculum designing of different subjects said that they didn't purposely integrated POP/FL topics in the subject courses they designed.

Although change in the attitude of the students towards POP/FL problem (a1) was observed during the post-test, there was no attitudinal change of the students towards POP/FLE (a2) and the overall attitude (A) of POP/FL issues in general. However, highly significant change in the students' POP/FL practice was found during the post-test.

5.2 CONCLUSIONS

Based on the foregoing discussion, it can be said that the students in colleges of teacher education have acquired POP/FL knowledge, developed favourable attitude towards POP/FL issues, and practice them before they enrolled to their respective colleges. In this case correlation was found between the students' KAP level and the intensity of their source of information. In this case, the informal sources seem to contribute a lot towards their KAP. For instance, where the activities of NGOs like the Red Cross Society of Ethiopia and FGAE is intense, they are likely to facilitate attitudinal changes of the students towards POP/FL issues on a positive direction.

Similarly, religious institutes are expected to be an agent of dissemination of POP/FLE to their congregations. Moreover, since urban centres have favourable condition for the spread of information, students from these areas seem to have better knowledge and favourable attitude towards POP/FL issues. On the other hand, the traditional influence that hinders females from discussing sexual matters seem to affect the KAP level of girls in the colleges. Much is expected to change the attitude of this group specially of those who are living in rural areas.

When we consider the status of POP/FLE in the courses, no deliberate action was taken towards integrating POP/FLE in different courses. Instead, due to the interrelated nature of different disciplines, some fragmented ideas which are related to POP/FLE have presumably contributed to the improved knowledge level of the students. Although it is premature to conclude that the courses in the colleges are inefficient to bring attitudinal and behavioural change of POP/FL among the students, (since it needs the evaluation of the whole program), it seems that they lack depth and strength to bring the expected change. Furthermore, since the availability of

POP/FL related topics vary with department, the opportunity of knowledge exposure of students also vary with their departments. Besides, relationship was found between the students' level of POP/FL knowledge and their involvement in different clubs where those who are involved more in activities that are directly related to POP/FL issues will have much access to POP/FL information but those who do not may lack it.

Moreover, lack of relevant materials in POP/FLE and skilled manpower appears to hinder the possibility of integrating POP/FLE to the appropriate level of different subjects where there are POP/FL related topics. Of course, at present it is not clear whether it is lack of course content integration or the teaching emphasis of each instructor that deter attitudinal change.

5.3. RECOMMENDATIONS

On the basis of the findings the following recommendations are forwarded:

1. Since there are appropriate points in different subjects that allow the integration of POP/FLE, it seems imperative that reform be made in the designing of courses. Towards this end, not only subject specialists, but POP/FLE specialists should examine the whole course

content of each subject to facilitate the integration process. In addition, balance should be maintained in providing equal opportunity for all departments of the first year course.

2. The production and distribution of resource materials which are directly related to POP/FLE seems necessary, because the provision of up-to-date information regarding POP/FL issues for the instructors and the students appear to be highly necessary.
3. It seems essential to provide instructors with POP/FLE training through workshops, seminars and in-service programs to acquaint them with basic knowledge.
4. The organising, financing and leading of extra-curricular clubs such as the Red Cross club, anti-AIDS club, the Environmental Protection club and others seem to be of paramount importance. This is so because these clubs appear to be important in encouraging direct involvement of the students in POP/FL activities thereby facilitating attitudinal and behavioural changes.

5. The Colleges' mini-media appear to be important to disseminate POP/FL information during the recess time of the students by re-transmitting the POP/FLE programs of the government media. To do so, the club needs to be equipped with appropriate materials.
6. The roles of NGOs such as the FGAE and the Red Cross Society as well as religious institutes seem to be highly valuable in disseminating POP/FL information in the educational institutes and in the society. Therefore, concerned officials should create greater access to utilise these institutions towards the provision of POP/FLE out of class sessions.
7. Since there is variation in the amount of POP/FL related topics in different departments, and there is great desire, among the students as well as the instructors, for the provision of POP/FLE as a separate subject conditions should be facilitated to provide POP/FLE as a common course.
8. Finally, since the issue of POP/FLE in the Ethiopian context has not been adequately researched, the researcher suggests their further study be done with a larger sample in different levels of the educational establishment. Another area of research is the question

of how teachers could be oriented to facilitate attitude change while they deal with POP/FLE, POP/FL problem and POP/FL issues as a whole.

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APPENDIX A

ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES FACULTY OF EDUCATION

A questionnaire Prepared for students in Colleges of Teachers Education.

This questionnaire is intended to assess the status of "Population and Family Life Education" in the curriculum of teachers Colleges and its effect upon the "knowledge, attitude and practice" of the students.

The questionnaire consists of five parts. I would appreciate you very much if you could help me by providing honest and frank responses. I assure you that your answers will be kept confidential and used solely for research purpose

Thank you in advance for your co-operation.

PART ONE- BIOGRAPHIC AND PERSONAL DATA

Instruction:- Please give your answer in the space provided or indicate by putting(X) mark in the box

A. BIOGRAPHIC DATA

1. Sex:- 01. Male ☐ 02. Female ☐
2. Ethnic group: _____
3. Religion 01. Orthodox ☐ 02. Catholic ☐ 03. Protestant ☐
04. Muslim ☐ 05. If other specify _____
4. Place where you lived most of your life
01. Urban ☐ 02. Rural ☐
5. Marital Status
01. Single ☐ 02. Married ☐

B. Supplementary Personal Information

1. College 01. Awassa ☐ 02. Gonder ☐
2. Department
- | | |
|--|--|
| 01. Amharic ☐ | 05. Geography ☐ |
| 02. Biology ☐ | 06. History ☐ |
| 03. Chemistry ☐ | 07. Mathematics ☐ |
| 04. English ☐ | 08. Physics ☐ |
3. Have you any orientation or training or experience in Population and Family life issue prior to your enrolment in this program.
01. Yes ☐ 02. No ☐
4. If yes, Please indicate only your major source among the following.
01. High school ☐
02. Family (Parents and Relatives) ☐
03. Friends (Peer and neighbours) ☐
04. Family Guidance Association ☐
05. Medical Personnel. ☐
06. Mass media (Radio, TV & newspapers) ☐
07. Training and Seminars. ☐
08. Religious institutions. ☐
09. If any other specify:- _____
5. Do you believe that you have acquired Population and family life knowledge from your college courses so far?
01. Yes ☐ 02. No ☐

PART TWO - ACHIEVEMENT TEST

Instruction: Following are multiple choice items focusing on Population and family life knowledge. Please choose and circle the best answer from the alternatives given.

1. High Population growth:
- Increases the productive labour force of a given country.
 - Increases the demand and consumption of natural resources.

- c. Increases the defending capacity of a country from its enemy.
 - d. All are correct.
- 2. Which one of the following statement is correct about family planing?
 - a. Births should be spaced at least by two years
 - b. The optimal child bearing age should range between 20 and 35 for a woman.
 - c. The maximum number of children that a woman must have not exceed four or five.
 - d. All are correct.
- 3. How much is the estimated crude rate of natural increase for Ethiopian Population.
 - a. 1.9% b. 2.1% c. 0.9% d. 3.1%
- 4. The most serious problem of developing countries is
 - a. Water pollution c. Air pollution
 - b. Soil erosion d. Population growth
- 5. which of the following methods of contraception is most effective?
 - a. Condom (male prophylactic)
 - b. Rhythm.
 - c. Diaphragm plus jelly or cream.
 - d. Intrauterine device (loop or bow).
- 6. The single most important factor in achieving pregnancy is:
 - a. Time of exposure in the cycle.
 - b. Female's desire or wish to become pregnant.
 - c. Frequency of intercourse.
 - d. Female's overall state of health.
- 7. How much is the dependency ratio for Ethiopian Population?
 - a. For every 100 active persons 116 inactive ones.
 - b. For every 100 active persons 50 inactive ones.
 - c. For every 50 active persons 100 inactive ones.
 - d. For every 116 active persons 100 inactive ones.
- 8. One of the following is true about women of developing countries?
 - a. They are exclusively defined in terms of household management and matrimonial duties.

- b. They are expected to replenish the race by bearing a large number of children
 - c. Female illiteracy rate is higher than that of males.
 - d. All are correct
9. Which of the following is the most dependable (effective) method of contraception or birth control?
- a. Condom (male Prophylactic).
 - b. Diaphragm plus jelly or cream.
 - c. Rhythm.
 - d. Pill.
10. Which one of the following is true about the Population of Ethiopia?
- a. It is very young with 48.0% of it being less than 15 years old.
 - b. It is very old with 50.0% of it being above 60 years old.
 - c. It is Characterised by an increase in mortality rate.
 - d. It has high proportion of male than female.
11. One of the following is correct about the Population of Africa.
- a. It is slowly growing.
 - b. It is rapidly growing.
 - c. It is not increasing.
 - d. It is decreasing.
12. Which one of the following is true
- a. Menstrual blood is similar to a body "poison" or toxin that must be eliminated in order for a woman to remain healthy.
 - b. A woman who begins to menstruate on the first Wednesday of every month is "as regular as a clock."
 - c. The loss of one ovary through disease or surgery diminishes a women's fertility (ability to conceive) little if at all
 - d. Withdrawal is an effective means of contraception (birth control)
13. Following release from the ovary the human Ovum (egg) is capable of being fertilised for
- a. 6 to 12 hours.
 - b. 24 hours.
 - c. 48 hours.
 - d. 4 to 6 days.

14. A good index of a female's relative fertility (ability to achieve pregnancy) is:
 - a. Her overall health.
 - b. The regularity of her periods.
 - c. The level of intensity of her sex drive.
 - d. Her ability to achieve orgasm.
15. The normal female most often ovulates (gives off egg)
 - a. Two weeks before the onset of menstruation.
 - b. Just prior to menstruation.
 - c. Immediately following menstruation.
 - d. At unpredictable time throughout the cycle.
16. Fertilisation (Union of Sperm and egg) normally occurs in which of the following anatomical locations?
 - a. The Uterus (Womb).
 - b. The Cervix (mouth of Womb).
 - c. The tube.
 - d. The Vagina.
17. Which of the following is Correct?
 - a. Birth Control pills directly increase the sex drive (desire) in most women.
 - b. Sperm retain their ability to fertilise (cause pregnancy) for one to two days following ejaculation (release).
 - c. unplanned or undesired pregnancies have a greater likelihood of miscarrying than do planned pregnancies.
 - d. Failure to have an orgasm on the part of the female eliminates or substantially reduced the likelihood of becoming pregnant.
18. Infertility (inability to achieve pregnancy) is:
 - a. Familiar or inherited.
 - b. A male problem in one-third of the cases.
 - c. A female problem in 90% of the cases.
 - d. Easily diagnosed after six months of marriage.
19. Which of the following is the poorest or least dependable method of contraception?
 - a. condom (male prophylactic).
 - b. Diaphragm.
 - c. Post intercourse ducting.
 - d. Rhythm.
20. Where do you expect to get contraceptives easily from?
 - a. The office of Red-Cross society..

- b. The office of family planning and Health centres.
- c. Local Population office.
- d. any shop.

PART THREE - ATTITUDE INVENTORY

Instruction:- The following statements represent opinions on Population and family life problems and Population and family life education. Your agreement or disagreement will be determined on the basis of your conception and experience of the subject in question. Please kindly mark (x) your position on the scale as the statement first impresses you.

The letters on the scale values are mentioned as follows:

a = strongly agree

c = disagree

b = agree

d = strongly disagree

ITEMS	Scale Value			
A. POPULATION AND FAMILY LIFE PROBLEMS	a	b	c	d
1. We are not approaching as such to the limit of the number of people the earth can support				
2. the Population of Ethiopia should rapidly increase in the coming ten years because the country has large surface area to support its Population				
3. To control birth is to go against nature				
4. Birth control methods should not be used in any case				
5. The state should discourage all forms of family planning propaganda				
6. Birth control practices are responsible for the increase of illegal sex relations				
ITEMS	Scale Value			
A. POPULATION AND FAMILY LIFE PROBLEMS	a	b	c	d
7. The decision to have or not to have children should rest primarily in the husband and his relatives				

8. Use of any form of birth control technique brings discontent in marital life.				
9. When family planning ideas will be spread throughout the country, they will increase the divorce rate				
10. Use of birth control methods often create side effect specially for the female partner				
B. POPULATION AND FAMILY LIFE EDUCATION				
11. Though all couples and individuals have the right to decide freely the number and spacing of their children, the integration of Population and family life education in the Ethiopia school curriculum is so important.				
12. Teachers are among those with direct responsibilities in combating ignorance of Population and family life problems				
13. Population and family life education is very essential if the ever growing Population is to be checked				

14. The training of teachers to deal with Population and family life problems is one of the most Urgent needs in teaching				
15. Responsible citizenship can be developed through Population and family life education				
16. Population and family life education can be one of the means by which environmental deterioration can be prevented				
17. Educating girls is three times more likely to lower family size than educating boys				
18. Media Coverage of Population and family life issues should be organised and extended in Ethiopia to reach the masses				
19. The prevention of sexually transmitted disease and AIDs can be possible through Population and family life education				
20. Parents should allow their children to discuss sexual and family life matters with them.				

PART FOUR - RATING SCALE

Instruction:- Put (X) mark in the adjoining column how often the following Population and family life activities occur or exercised in your college and/or in your daily practical life. The numbers represent the following values.

1. Never 2. Sometimes 3. Often 4. Always

ACTIVITIES	Scale Value			
	1	2	3	4
1. Group discussion on issues related to Population growth, poverty, natural resource management and utilisation, and family size limits etc.				
2. Participating in campaigns like literacy, tree plantation and others				
3. Disseminating the information that you have on Population and family life issues to your friends, neighbours and other peoples				
4. Group discussion on ways of transmission of sexually transmitted disease and AIDS.				
5. Utilising your College mini media and audio-visual aids to transmit Population and family life knowledge				

Item	Scale Value			
	1	2	3	4
6. Attending lectures on Population and family life issues by guests from Family Guidance Association, the Red-Cross society etc.				
7. Participating in extra-curricular activities such as in Anti-AIDS club, the Red-Cross, and Environmental Protection Clubs and others				
8. Having sexual intercourse before marriage				
9. Exercising sexual intercourse more than one partner				
10. Using contraceptives such as pill, condom, diaphragm etc. to prevent unwanted pregnancy, sexually transmitted disease and AIDS				
11. Consulting medical personnel, teachers and/or school social workers and guidance officers when problems on sexual issues and family life matters are encountered				
12. Attending programs that focus on Population and family life issues through mass media such as radio, TV. newspapers etc.				

PART FIVE - GENERAL COMMENTS

Instruction: Please write your comment on Population and family life problem, Population and family life education, and the activities in your college that are related to these issues in the space provided below.

Appendix B

Interview Questions for Department Heads in the Colleges of Teachers Education.

1. What is your qualification?
2. Do you have any orientation or training in Population and family life education?
3. Is there any one who has participated on Population and family life workshop or seminar in your department?
4. Are there any objectives or contents in the first year course of your department that are related to Population and family life education?
5. If so, are they appropriate for Population and family life education and are they elaborated?
6. Is there any special chapter or topic on Population and family life education in the courses of your department?
7. Do the instructors in your department attempt to integrate Population and family life education in their subjects?
8. What do you think the main problems facing your college to integrate Population and family life education topics in different courses.
9. Is there any extra-curricular activity that is related to Population and family life education in your college?
10. Are there any non governmental organisations which offer non formal Population and family life education in the schools in your region as well as your college? Please specify their activities?
11. What do you suggest about the introduction of Population and family life education in your college courses?
12. Do you have any additional comment or recommendation about Population and family life education in the curriculum of teachers education?

APPENDIX C

Interview Questions for Curriculum Designers of the Colleges of Teachers Education

1. What is your qualification?
2. In which panel of the curriculum design did you participated?
3. Have you ever attempted to integrate population and family life education in the courses you designed?
4. Have you any training or orientation about population and family life education?
5. Have you participated in workshops or seminars that are attempted in the integration of population and family life education in different subjects?
6. Have you attempted to establish vertical as well as horizontal integration of the subject by working with the co-operation of different panels?
7. could you please explain your personal stand about the infusion of Population and family life education in different subjects of Colleges of teachers education?
8. Were there any constraints and difficulties to integrate Population and family life education in the curriculum of teachers colleges?
9. What do you suggest about the introduction of Population and family life education in the curriculum of formal education as a whole?
10. Have you any additional comment or recommendation regarding the introduction of Population and family life education?