Most of the studies reported here are comparatively recent ones. It is assumed that these studies would have taken into consideration some of the earlier studies. Some of the reviewed studies had aimed at developing curriculum for schools and training colleges. Twenty one studies conducted in the field of population education were analysed by RAO (1981). Findings of most of these have revealed that the students, teachers and the parents were aware of population problems. Both the parents and the teachers favoured the introduction of population education in schools but were against the introduction of sex education. It is interesting to note that some illiterate parents wanted their children to learn not only about population problems but about sex education also. Many of the teachers were not aware of the concept of population education. When the concepts were made clear to them, they favoured the introduction of population education in the school curricula.

A Research-cum action study was conducted by Gangrade on population education for university youths (1975). The objectives were to develop a model syllabus in population education at the university level and to develop an appropriate methodology for introducing population education for the college students based upon the experience gained in this programme.
He suggested the following curriculum:-

a) Demographic trends - their determinants and consequences.
b) Social and economic developments, their improvements and methods.
c) Sociological factors and population growth.
d) Social, community and family organization.
e) Human reproduction, family life and interpersonal relationship.
f) Family size norms.
g) Basic values and the quality of life for human progress.

It was suggested that the content of population education thus developed should be taught not directly but in the form of an action programme including seminars, exhibitions, film shows, lectures and debates.

A study conducted by Veena Gupta and associates (1979) aimed at making an assessment of the awareness of adolescents towards population dynamics, human reproduction and the family planning programme. The knowledge of students regarding population dynamics was found to be poor. Girls seemed to be better informed than boys with respect to information on human reproduction. An assessment of the students knowledge about
family planning methods revealed that girls knew more about female methods while boys knew more about male methods.

A study conducted by Neelima Jain in 1981 to evaluate the perception and attitude of the college going female students towards population education reveals that all respondents agreed on considering population as a serious problem. But they did not have any specific awareness and knowledge on the nature and the extent of population as a problem. Again very few of them had their own ideas about controlling the population. Their knowledge on the reproductive process was also not adequate.

A study to Analyse the population education content of current text books in the Phillipines public elementary and secondary schools was conducted at the Institute of Ministry of Education, Culture and sports population education programme, Manila, 1973, with the following objectives:-

1. To determine what proportion of current text books have been devoted to population content and to determine the manner in which the content has been treated.

2. Specifically, it sought to find:
   (a) to what extent the topics in population education are included in the current text books
   (b) to what extent the topics and sub-topics are covered in each subject area and
(c) to find out the population topics treated in each book are systematic or not.

Sample taken was 74 volumes drawn from the text books used in grades I and III for the primary level, grade V for intermediate level and first and third year for the secondary level. Findings of the 22,600 pages analysed in 74 volumes of current text books used at the primary level revealed that 2.45% of the 6,310 pages examined contain population concepts.

The number of pages of demography is 0.93%, pages on determinants are 0.94%, pages on consequences are 0.19% and pages on sexuality are 0.39%.

At the intermediate level population concepts are contained in 2.46% of the 6,972 pages analysed of which 0.66% pages are on demography, 0.98% are on determinants, 0.44% are on consequences and 0.38% are on sexuality.

At the secondary level 1.65% of 9,318 pages analysed contain population concepts broken into 0.64% on determinants, 0.33% on consequences, 0.40% on demography and 0.27% on sex education.

The text books in social studies present the most population concepts with a percentage of 5.68. Health and Science is the only subject areas that present population topics on sexuality.
Another study was conducted in the field by Manjul, J.S. at the Institute of Central Health Education Bureau, New Delhi in 1970 entitled "Developing a conceptual Model of the curriculum in Health & Population."

The Curriculum model consists of the following three key concepts related to the inter-related components of health & population education. Concept 1. Quality of life is a function of population size and the optimum utilization of available national resources. Concept 2. Family as the basic unit of society fulfills certain individual and social needs. Concept 3. Health is a moving target, an ecological resultant involving the interaction of many factors & conditions.

Mehta T.S and others developed a syllabus in population education for the higher secondary school stage at the population education cell, NCERT, New Delhi, 1971. A few workshops of teacher education and population experts were held to develop a syllabus for three stages of education, namely, elementary, lower secondary and higher secondary. The contents were woven around the following five areas:

1. The population growth.
5. Biological factors - Family life and Population.
A study was conducted by Faneuff, C.T. (1971) "Action Research for the Development of a Pilot Model for teaching population dynamics information", at the Institute, Pathfinder Projection fund, New Delhi, with the following objectives:

1. To develop syllabus in population education suitable for 9th standard students.
2. To impart knowledge through formal and informal methods.
3. To find out the suitability of the content and methodology.

In the pursuit of the above objectives, the following content areas have been found suitable for the 9th class students:

1. Birth rate, mortality rate and population.
2. Health and population.
3. Food production and population.
4. Family size and population.
5. Standard of living and population.

A study conducted at the Institution of Carolina Population Centre, University of North Carolina, U.S.A. by Dr. Rao, D. Gopal in 1974 on the topic - 'Developing a Concept Based Curriculum in Population Education for Indian Children'. A model was prepared on three major concepts related to the causes, consequences and control of population which is termed as 'triad' of population education.
1. Modern health practices save and prolong lives but simultaneously create new problems arising from rapid population growth.

2. Population characteristics affect the socio-economic development of the nation.

3. Population Control is an individual, a national and international responsibility.

Each key concept is divided into a number of sub-concepts and spelled out in a behavioural terms under three categories of objectives namely cognitive domain, affective domain and behavioural domain.

Mehta, T.S. and others (1972) at the Institute of Population Education cell, NCERT, New Delhi studied "Plug points for Population Education in School Curriculum" with the following objectives - To find out the content areas in different school subjects through which population related knowledge can be imparted.

The content analysis of the various syllabi in different subjects from different states made on the basis of the existing content on population education suggested:

1. Population contents cut across the boundaries of several school subjects, such as general science, geography, economics, civics, social studies and mathematics.
2. The main theme relevant to population education programme in different syllabi may be classified as under:

a) Adjustment of man and nature.
b) Improvement of the quality of living.
c) Increasing the effectiveness of social institution such as family, community, society etc.
d) Better allocation and utilization of resources, both human and material.
e) Social stability and social welfare.

3. Based on the objectives of teaching different school subjects, the following major areas were identified for population education:

a) The population growth.
b) Economic development and population.
c) Social development and population.
d) Health, nutrition and population.
e) Biological factors, family life and population.

At the Institute of Population Education Cell, NCERT, Mehta, T.S. and others (1974) worked on 'Developing a population education syllabus for teacher training colleges'. For this purpose they organized a workshop consisting of teachers and educational experts at Allahabad where discussions were held and the content was developed.
The contents were woven around the following twelve major areas:

1. Concept of population education
2. Population situation in India and world perspective
3. Population dynamics
4. Population growth and economic development
5. Population growth and social development
6. Population growth and educational development
7. Population growth and urbanization
8. Population growth, environment and national resources
9. Population growth, health and nutrition
10. Population growth and family life
11. Population growth and population policies
12. Teacher's role in population education

A study on Population awareness among school students in Goa (Standard VII to XI) as well as among teachers and parents and their reactions to the inclusion of population education in the school curriculum was conducted by Salkar (1974) reveals that school teachers in Goa were sufficiently aware of the population problem of the country on the whole. They were in favour of introducing population education in the school curriculum. The parents also felt that population education should be included in the school curriculum.

Findings of a study conducted by Kapur and Jha (1982) with the purpose of finding out the role of Indian Magazines in imparting knowledge on population, human sexuality
Magazines can be a very acceptable communication channels especially in the field of population, family welfare and human sexuality;

b) Scientific knowledge about human sexuality, population and family living deals with the vital aspects of life and is required by youth and young adults as basic to their education.

Varghese, P.V. (1977) made "A study of the Attitude of teachers towards different aspects of Population Problems", at Government Teachers College, Bangalore with the objective to find out the attitude of different categories of teachers towards different aspects of population problems on a sample of 276 teachers drawn from primary schools and high schools from the city of Bangalore.

Findings:

1. The teachers teaching at the primary and high school levels differed in their attitude towards population education.

2. The male and female teachers differed in their attitude towards population education and sex education.
3. Marital status of teachers had neither any bearing on the attitude towards population education nor on sex education.

4. Teachers belonging to different religious groups did not differ in their attitude towards population education but they differed in their attitude to sex education whereas the religion of teachers was significantly related to their attitude to family planning and sex education but it was not related to their attitude towards population education.

Another study conducted by Shri Rehmansiddique (1979) on the topic "Developing a population education Curriculum for out of school youth" at the central Institute of Education, University of Delhi had the following objectives:-

a) To develop the content of the curriculum by eliciting opinions of educationists, economists and national planners.

b) To categorize the contents into suitable headings.

c) To develop the objectives and content of population information to be given to out of school youths.

d) To develop a curriculum model for the out of school youths.

The theoretical model of curriculum was tried out on 300 students of Bangladesh.
The findings are as :-

1. The curriculum model developed for imparting population education for out of school youths includes the following areas
   - Population situation in family, community and country.

2. Population growth, factors affecting population growth, causes and nature of population growth in Bangladesh.

3. Consequences of rapid population growth on (a) quality of life, availability of food, clothing and shelter (b) Economic and social facilities, resources, health and medical facilities, nutrition, water supply, educational facilities, transportation, employment facilities, law and order situation. (c) environmental pollution and ecological balance.

4. Population control and better living.

5. Human reproduction and contraception.

Another study conducted in the field by Thakore Rashmin (1979) at Teacher Training College, Ahmedabad on the topic "Developing a Curriculum in Population Education for Secondary Teacher under Training" had the following objectives:-

a) To develop a curriculum in population education for secondary teachers under training.
b) To select content and the learning experiences in the curriculum and to arrange the content on specific heads of teaching-learning units.

c) To try out the developed curriculum in the normal setting of a secondary teachers training college.

d) To evaluate the effectiveness of the curriculum in terms of the resultant change in the knowledge, understanding and attitude of the student teachers.

The model was tried out on 200 teacher trainees of the Secondary Training College.

Findings:

1. A curriculum model for imparting population education to the trainees of the secondary teacher training colleges has been developed. The model has drawn content from the following 10 areas:

a) Introduction to population education.
b) Population dynamics and population situation.
c) Population growth and economic consequences.
d) Population growth, environment and natural resources.
f) Population growth and social implications.
g) Population growth and urbanization.
h) Population growth and education.
i) Population growth, family life, health and nutrition.

j) Teacher as a population educator.
2. The curriculum model developed on the basis of this study is effective in carrying the message of population education to the teacher trainees.

3. The model not only helps in imparting knowledge of population dynamics and the effect of population growth on developmental programmes but also help in developing a positive attitude among teacher trainees towards the introduction of population education in the school curricula.

4. The ten topics included in the model can be taught in 20 periods of 40 minutes each and another 10 periods are required for imparting the message through co-curricular activities.

Thus, it has been established by this study that it is possible to impart an effective training programme in population education to the teachers under-training in Secondary Teacher Training Colleges in a programme lasting for 30 periods of 40 minutes duration.

SALENT FEATURES OF POPULATION EDUCATION RESEARCH IN PUNJAB

1. In Punjab, Population Education research is still in its infancy as population education itself is a new innovation in the field of education.

2. It was in 1983 that the first study, financed and assisted by population education cell was completed. As a result of financial assistance and guidance provided by population education cell, more and more students are
3. Universities are encouraging the students for research in the field of population education.

4. Most of the studies have been undertaken at M.Phil level.

5. Research in the field of population education reveals that students and teachers in general favour small family size.

6. Themes of population education exist in the textbooks at school level and there is still scope to infuse and integrate more themes.

7. Most of the research studies have been undertaken to judge the knowledge and attitude of various groups.

8. The research reveals that increase in population affects the child labour and labour force on the whole.

9. It has been found that mass scale training programme organised by population education cell are effective.

10. The method employed in the collection of data in most of the studies is by means of questionnaire. In some cases interview method has also been used.
A study conducted by Parminderjit Kaur (1985) at Punjabi University, Patiala on the topic "Analysis of Population Education Concepts Occurring in the textbooks of General Science and Social Studies of Middle Classes in Punjab has the following objectives:

a) To examine the status of population education in the current text books of science and social studies.

b) To examine the contents in which adequate emphasis has been given to the population education themes.

c) To suggest the scope of additional population education themes in the existing text books in science and social studies for middle class (VI to VIII).

d) To evaluate the contents of population education regarding its relevance to the mother subject and the naturalness of its occurrence in the text.

e) To determine the nature of the population related topics in terms of its being pro-natal, anti-natal or neutral.

f) To determine the frequency of occurrence of various population related themes, so as to find out duplicacy of repetition of the same theme and suggest remedial measures.

g) To provide suggestions to the teachers for the teaching of certain value laden areas concerning population problem.
The percentage of population education related issues were found out by taking pages devoted to population education contents multiplying with hundred and dividing by total pages of the books, the findings are:

a) Of the 1891 pages analyzed in 8 volumes of text books 2.75% contain population concepts. The existing population education concepts are population increase and basic necessities, population and environment and pollution, resources and economic development, socio-cultural values education and employment, personal hygiene, health and nutrition, inter-dependence of man and other animals, status of women in society, demographic attitude etc.

b) In the subject of science at 6th class level, the total population education concepts available are 2.51%, 4.05% at 7th class level; 2.17 at 8th class level.

c) In the subject of Social Studies, there are 1.88% population education concepts, at 6th class level, 0.23% at the 7th class level and 2.35% at the 8th class level. In the subject of Geography, the population education concepts are 5.01% at 7th class level and 7.4% at the 8th class level.

d) It is true that there are contents regarding population education in both the subjects, but there is also a
scope to integrate additional population education concepts to make clear the existing population education concepts.

It is a matter of fact that science subject devotes comparatively more pages to population education at all levels.

Another study conducted on the topic, 'An Evaluation Study of Training Programme in Population Education for Teachers of Punjab at Population Education Cell,' Punjab (1985), with the following objectives:

a) To determine the increase in the knowledge and change in attitude among the trainees after they have received the training in population education.

b) To determine the extent to which the trainees have been able to develop awareness of demographic terms and population situation of Punjab, India and that of the world.

The findings are:

1. There has been a significant increase in the knowledge of trainees during the training programme.

2. There has been a favourable change in the attitude of trainees towards population issues after the training.

Most of the studies reviewed above suggest that the rapid growth of the population is seen as a problem in India.
However, it is revealed that the young generations have poor knowledge; in fact they carry misconceptions regarding human sexuality and reproductive behaviour and are interested in receiving population education. Therefore, it seems there is an urgent need to properly educate the younger generations so that they have a better understanding of the population situation in the country, this would in turn help them to take right decisions for themselves.