8-1981

Development and Validation of a Model for Retaining Pregnant Adolescents and School-Age Parents in the Jamaican School System

D. Deloris Brissett
Western Michigan University

DEVELOPMENT AND VALIDATION OF A MODEL FOR RETAINING PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN THE JAMAICAN SCHOOL SYSTEM

by

D. Deloris Brissett

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
Kalamazoo, Michigan
August 1981

DEVELOPMENT AND VALIDATION OF A MODEL FOR RETAINING PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN THE JAMAICAN SCHOOL SYSTEM

D. Deloris Brissett, Ed.D.

Western Michigan University, 1981

The purpose of the study was to develop and validate a model to retain adolescent child-bearers in the Jamaican school system. More specifically, the study was concerned with retaining pregnant students and adolescent parents in Jamaican secondary schools.

The analytical bases of the model were:

1. A review of the literature in adolescent child-bearing in Jamaica and the United States.

2. A survey of programmes which currently deliver comprehensive services to pregnant students and adolescent parents in Michigan. Five programmes were surveyed.

3. Validation by a panel of Jamaican professionals.

The review of the relevant literature and the programme survey indicated that adolescent child-bearing has serious medical and social implications for both Jamaica and the United States. The literature review and the programme survey both indicated that intervention programmes have been used successfully in the United States to reduce the adverse effects of the phenomenon.

On the basis of that finding, a model was developed to propose a programme to mitigate the adverse effects of adolescent child-bearing in Jamaica. The model for Retaining Pregnant Adolescents and School-

Age Parents in Jamaican Secondary Schools (MRPA) is a systematic, non-mathematical change model. The six stages of the model--problem analysis, need definition, goal-setting, resource identification, implementation and control--indicate a dynamic mode. This mode is consistent with the social context of the problem.

The model was validated by a panel of five members, each of whom had demonstrated expertise in the area of adolescent sexuality and was knowledgeable regarding the Jamaican society and educational systems. Criteria applied to the selection of the validation panel included knowledgeability, expertise, availability and group size.

The validation of the model was in two stages. First a self-administered validation questionnaire was completed by each validator. Scheduled interviews with each validator followed the completion of the questionnaire. Results of the validation indicated that with some modification the MRPA is appropriate to be implemented in Jamaican secondary schools. Modifications to the model were made, based on the findings from the validation process.

Implementation of the model in the Jamaican school system was intended to:

1. Reduce the incidence of pregnancy-related drop-out from Jamaican secondary schools.

2. Increase the chances for economic self-support among adolescent parents.

3. Have a positive effect on decreasing the rate of adolescent child-bearing in Jamaica.

ACKNOWLEDGEMENTS

During the fashioning of this tribute to endurance I have become indebted to many individuals, groups and organizations. Each of these has helped to transform a nebulous thought into the realm of possibility and, much later, into reality.

I wish to express my appreciation to my Doctoral Committee for the time and the effort they gave so generously. To Dr. Don Weaver, my academic advisor, and Chairperson of my Committee, special thanks for being accessible. It was always reassuring to know you could be reached.

My special thanks to Dr. Charles Brown whose sensitivity and reassurance were invaluable. I wish you joy in a productive retirement! I also wish to thank Dr. Franklin G. Fisk for posing the questions.

My special thanks extend to a special group of people--a Community of Scholars--who understood, or tried to. Their emotional support and encouragement were priceless. My family has always believed in me and, their confidence made the 'horrors' worthwhile.

To the several organizations which helped to make the achievement of the doctoral degree financially possible, my sincere appreciation. The generous assistance of the Educational Leadership Department at Western Michigan University, the Mott Foundation and the American Association of University Women, has been well appreciated.

Finally, thanks to an understanding room-mate and all the people who cared and encouraged me.

D. Deloris Brissett

BRISSETT, D. DELORIS

DEVELOPMENT AND VALIDATION OF A MODEL FOR RETAINING PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN THE JAMAICAN SCHOOL SYSTEM

Western Michigan University ED.D. 1981

TABLE OF CONTENTS

Chapter

Chapter

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

PROBLEM STATEMENT

Rationale

In recent years, the incidence of adolescent pregnancies has escalated sufficiently to become a major social concern both in Jamaica and the United States. The literature on population growth and adolescent fertility reveal that the current decline in overall population growth is not reflected in the fertility behaviour of the adolescent sub-population. Goldmeier (1976) has indicated that the proportion of live births among United States adolescents has increased so that by 1974, adolescents accounted for 20 per cent of the total number of live births in the United States. Goldmeier also indicated that the number of adolescent mothers in the United States is increasing.

A similar trend has been noted in Jamaican population movements. Powell (1978a) observed the decline in the overall rate of growth of the Jamaican population between 1960 and 1970. However, there has been a marked increase in the number of births to women under twenty years old. The women contributing most significantly to this population increase were in the 15 to 19 cohort. In 1976-1977, this group accounted for 30 per cent of all live births in Jamaica. According to Cumper (1977) the number of adolescent mothers under fifteen years old has also increased. However, she observed that insufficient attention has been paid to this group and there is a consequent paucity of research to describe their fertility behaviour.

The falling age of menarche has been offered as one of the prime explanations for earlier motherhood and the increasing number of adolescent births in Jamaica (Roberts & Sinclair, 1978). In the United States, a similar explanation has been offered by Nye (1978) and the cross-national occurrence has been noted also by Frisch (1980). The decreasing age of menarche could also account for larger family sizes, and at earlier ages, among women who started their child-bearing careers as adolescents.

The problem of adolescent pregnancies is multi-faceted and the social consequences are numerous with severe social implications. Early child-bearing is characterised by medical, social and economic risks (Nye, 1978). These risks affect not only the youthful mother, her baby and her immediate family; ultimately, the consequences are long-lasting and severe for the total society (Powell, 1978b).

Identifiable emphases in a systematic study of the problem include (a) the psychological, physiological and sociological explanations of the phenomenon, (b) the nature of the relationship between the incidences of early child-bearing and high-risk mothers and high-risk babies and (c) the possible need for early intervention.

Explanations

Earlier physiological but later social maturation among adolescents in a technological society has been proposed as the major explanation for the increase in adolescent fertility. A second explanation has been based upon psycho-emotional maladjustment to the family environment. Adolescents dissatisfied with the family structure of origin will

consciously reject that structure, choose to become pregnant and establish a new structure in an attempt to escape the dissatisfying family environment. Other findings have led to a socio-economic explanation. It is still unclear whether the type of relationship between too-early pregnancies and socio-economic conditions is associative or causative, but a definite relationship has been suggested by current research (Card, 1978).

Mothers and Babies At Risk

There is an inverse relationship between the decreasing age of mothers at first birth and the incidence of high-risk mothers and high-risk babies.

Need for Intervention

The need for early intervention is constantly advocated as the single most effective approach to controlling adolescent fertility. Without early intervention, there are immediate and noticeable effects upon adolescent fertility behaviour.

Two consequences of non-intervention are the tendency for adolescent mothers to have repeat pregnancies within a relatively short time (Furstenberg, 1976). Furstenberg also observes that where there is non-intervention, adolescent parents tend to initiate or perpetuate a cycle of early pregnancies among their children. Ultimately, the social and economic condition of school-age parents and their children deteriorates, compounding the social problem.

This researcher takes the view that the educational system in a

society has a responsibility to that society. Firstly, the system has the responsibility to provide schooling which leads to personal development for all individuals, as determined by the social and educational philosophies of that society. Secondly, the educational system is responsible for supplying the trained manpower required by that society in its national development process. To fulfill either, or both parts of its responsibility, the educational system is often required to work with other social agencies and with students directly to help the students, to overcome the intervening barriers to a complete education (the minimum recognized by that society). School-age parenting is a major barrier to secondary school completion for students in the United States (Trussel, 1976) and in Jamaica (Archer, 1980; Powell, 1978b). Some school systems in the United States have shown a degree of responsiveness to the needs of the pregnant student or the student who is a parent, by creating various types of programmes to increase their chances of completing high school. Some systems have encouraged continuing education through adult institutes; others have provided home-bound instruction; while others have created special programmes outside of the regular school setting. Less frequently, and only more recently, have school systems accomodated pregnant adolescents and school-age parents in the conventional school setting.

Theorists and service providers in the field of too-early pregnancies disagree among themselves regarding the more appropriate mode of service delivery. Professionals in the field disagree on whether or not services for pregnant adolescents and school-age parents should be provided in the conventional or in alternative school setting.

Smith (1979) advocates mainstreaming of services. She claims that the socio-emotional climate in the regular classroom is healthier and the dollar-cost is less than when the alternative mode is used. Proponents of the alternative approach have maintained that the special care and facilities needed in educating these students can be more effectively provided in alternative settings.

The continuing dissension in the United States on the most appropriate mode of service delivery indicates some social awareness of the importance of the problems associated with too early child-bearing. The lack of discussion of the issue in Jamaica tends to indicate a low level of social awareness to those problems. The failure to acknowledge and discuss that problem could also mean the system's failure to grasp the implications of the problems for the Jamaican society. Knight (1980) has remarked upon the reluctance of Jamaican school principals to discuss the problem, and moreso, to acknowledge the presence of the problem in their schools. Knight (1980) contrasts that reticence with the perceived need for confronting the problem and developing counter measures and rehabilitative strategies to help pregnant students, the majority of whom subsequently drop out of school.

Victims of too early pregnancies, having dropped out of school, are likely to follow a predictable path to economic deprivation (Powell, 1978b) Secondary school certification is the prime pre-requisite for entry into the labor market or for further study. Without certification, and with their low level of skills, adolescent parents have reduced chances of gaining entry into the skilled labor market and becoming economically independent. Powell (1978b) supports this observation made

by the researcher. A Jamaican minister of government has remarked that youths caught in this situation are of national concern (Canon, 1979). The minister further commented that youths faced by adolescent child-bearing, unemployment, and economic deprivation are likely to become frustrated and alienated from the larger society. His conclusion was that the society needs to be cognizant of their predicament. Insensitivity to youthful disaffectedness, compounded by the problems associated with adolescent child-bearing could lead to a major social problem. This observation is credible in a society where the population is as young, and the rate of unemployment is as high as in Jamaica. Powell (1978a) comments upon the dual problem of Jamaica's population growth compounded by rising inflation. An immediate effect of that duality is the observed malnutrition among pre-schoolers; some of whom are children of adolescent parents.

The Jamaican school system seems to act counter-productively by being unresponsive to pregnant adolescents and school-age parents. The system has articulated a commitment to serve all students of elementary and secondary ages, yet, apparently, ignores the needs of this group of students. Upward social mobility is stated as a prime function of the educational system (Ministry of Education, 1978a). However, students who drop out of school due to premature pregnancies have reduced chances for that kind of mobility. Due to the limited opportunities for high school completion at a later time, the high school drop-out has few possibilities of re-entering the educational system and experiencing the chances for social advancement.

The case of the pregnant drop-out is even more critical. The

adverse effects of "drop-out" are immediately reflected upon the standard of living of the immediate families of adolescent mothers. In the United States, the Alan Guttmacher Institute (AGI) (1976) found that adolescent parents tended to be from low socio-economic background. Lampart, cited by Intercom (1978) has observed that the pregnant adolescent in Jamaica becomes the responsibility of her family because of the precarious economic situation and the reduced chances for upward social mobility for families of low socio-economic status, adolescent pregnantices tend to be more devastating to these families than to families of higher status.

An educational system is partly dysfunctional if it prevents access to the opportunities it provides. Presently, pregnant students and school-age parents in Jamaica, are largely being denied access to a complete education because of the structures of the school system. Such denial of access is contrary to the stated philosophy of the Jamaican Ministry of Education. It is, therefore, imperative that this ministry should formulate policies, and reorganize the system to reflect its concerns for the adolescent parent or pregnant adolescent.

The Need for Confronting the Problem

The increasing incidence of adolescent parenthood and the diverse social consequences in Jamaica indicate the seriousness of the problem for that society. Urgent attention is desirable and necessary if the problem is to be contained. Three major concerns become evident in a rationale for urgent attention to this problem. These concerns are:

1. Humanitarian concern. This writer takes the position that victims of too-early pregnancies are ill-equipped to deal with their situation without adequate support. Where adequate support systems are in place, young women have the opportunity to adjust to their situation and to take advantage of a second chance to improve themselves through education. Without this second chance through the school system; they, their children, and their immediate families run the risk of extended economic dependence and social deprivation.

2. Social costs. The costs of premature pregnancies to the Jamaican society may be discussed in terms of their potential to destabilize the society.

a. Implication for social destabilization. Premature termination or prolonged interruption of an adolescent's education due to pregnancy leads to reduced life chances for the adolescent and her child, or children (Menken, 1972). Ultimately, the society is required to make up the deficit created by the economic and social dependence of women who were victims of too-early pregnancies. The adverse effects of too-early pregnancies spill over to the children and youth who were products of such pregnancies. In Jamaica, Davidson (Canon, 1979) alludes to the potential for social destabilization that is associated with adolescent parenthood. When this problem is considered vis-a-vis the high proportion of youths in the Jamaican population (Powell, 1978a), the high unemployment (40%) among the 14 to 19 age cohort (Prosser, 1975), and the high national birth rate (Powell, 1978a), Davidson's allusion must be given serious consideration. The economic burden of the society

being borne by the minority of the population, and the discontent of the youths caused by high unemployment are two factors that could lead to the destabilization to which Davidson alludes.

b. Implications for economic development. Each individual that is trained or otherwise educated, is a potential resource in his or her society. Jamaica currently has an intense need for trained manpower to facilitate her national and economic development. Experiences of the past have indicated that training and development of local resources is more economical and effective in the long-run than recruiting skilled manpower from abroad. Consequently, the educational system fails to expedite national development by discarding potential human resources due to premature pregnancies.

The manpower waste that occurs due to premature pregnancies is critical from another perspective. Jamaican students are selected into the secondary levels by one of several competitive examinations. Secondary school students represent the top 20 per cent of primary school achievers. It is crucial that the school system should retain these students who have been identified as potentially high academic achievers with the potential to expand the pool of qualified manpower.

3. The status of women. Finally, the problem must be seen vis-a-vis its implications for the status of women in the society. A cause and effect relationship may be established between the economic dependency of women in this society and some patterns of fertility behaviour among them. It becomes a responsibility of the social institutions including the educational system, to adopt counter measures against

further entrenchment of this economic dependence.

An Overview of Jamaican Society

Jamaica is the largest and most developed of the English-speaking Caribbean countries. Its geographical location is between 17°-18° N latitude and approximately 77° N longitude. In relationship to the United States, Jamaica is approximately 800 miles south of Florida.

The approximate area of this country is 4,411 square miles (11,424 sg. km.) supporting a population of less than 2.2 million people. An estimated 53 per cent of the population is under twenty years old (Powell, 1978a) and concentrated largely in urban centers.

The Jamaican society is both multicultural and multiracial. The major racial group is Negro; this group comprises approximately 90 per cent of the population. The major cultural influence in the society are African, British and North American. The educational system with inputs from three major countries--England, Canada and the United States-- reflects the impact of external cultures.

The major economic activities are agriculture, tourism and mining (chiefly, bauxite). Agriculture is by far the most important in terms of proportion of the labor force it employs but not in terms of its contribution to the gross national product.

Goals of the Study

This study has been designed to achieve the following goals:

1. To conduct an extensive review of the literature relevant to adolescent fertility in Jamaica and the United States and report on the

magnitude of the problem in these societies.

2. To survey a sample of programmes providing services to pregnant adolescents and school-age parents in the United States.

3. To develop a Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools.

4. To validate the Model for Retaining Pregnant Adolescents in Jamaican Secondary Schools.

Assumptions

The assumptions which were subsumed in the goals for the study include the following:

1. The Jamaican Ministry of Education would be agreeable to implementing steps to confront the problem of adolescent fertility, if that Ministry were apprised of the scope of the problem, through proper documentation.

2. The Jamaican Ministry of Education would be disposed to consideration and subsequent implementation of specific programmes designed to retain adolescent child-bearers in Jamaican secondary schools.

3. Most students who become pregnant prior to completing their secondary education would welcome a second chance to complete their secondary education.

4. Adolescent child-bearers could benefit substantially from the second chance.

5. The social and economic benefits of retaining pregnant adolescents and school-age parents outweigh the dollar-cost to the society.

Problem Investigation

The analytical bases of the study will be the review of the literature and the survey of selected Michigan programmes. The study will generate both quantitative and qualitative data.

The major product of the study will be a model to retain adolescent child-bearers in Jamaican secondary schools. The model will be validated with respect to its theoretical and operational feasibility. Validation will be by a panel of experts knowledgeable of the problems associated with adolescent fertility, and knowledgeable regarding Jamaican social conditions.

Limitations of the Study

The limitations of the study relate primarily to its cultural and research biases.

The limitations of the study are:

1. Much of the research and the literature which were cited in the study originated in the United States. The model was developed for Jamaica which is at a different stage of economic development and possesses some dissimilar social structures. The dissimilarities in development and social structures could limit the appropriateness of the model in the Jamaican context.

2. Only four programmes which provide services to adolescent child-bearers in Michigan were sampled. The small sample size could limit the generalizability of the findings of that survey.

3. Validation of the model in Jamaica was done by five experts. The small sample size and the method of sampling could possibly limit

the authenticity of the validation process.

4. No research procedure for field testing the model was designed. The purpose of the study was to design a model to reduce pregnancy-related drop-out from Jamaican secondary schools. That purpose was accomplished. Field testing was recommended, subsequent to implementation of the model.

Operational Definitions

It is necessary to define certain terms to ensure their correct understanding within the context of the study. The following terms have been defined as follows:

1. Adolescents: Individuals who are experiencing the developmental stage marking the transition from childhood to adulthood. The transition is marked by the onset of puberty rather than the attainment of a fixed chronological age.

2. Pregnant adolescents: Young women who are experiencing the transition from childhood to adulthood, are of school-age and who are with child.

3. School-age parents: Young persons who have given birth to a child or children, and the alleged school-aged fathers of such children.

4. Alternative programmes: Programmes created outside of the conventional school setting to serve pregnant adolescents and/or school-age parents.

5. Mainstreamed programmes: Programmes developed within the conventional school setting, specifically to serve pregnant adolescents and/or school-age parents.

6. Secondary schools: Institutions offering educational experiences at a stage intervening between the primary and the tertiary levels. This category of institutions includes new secondary, high, technical, comprehensive and vocational schools.

7. Too-early child-bearer: A young person who gives birth to her first child, prior to the age of eighteen years.

8. Secondary school system: The network of schools offering education at the secondary level and, which are financially supported, in part or in full, and which are controlled by the Jamaican Ministry of Education.

Summary

The attention being given to the phenomenon of too-early child-bearing, in the United States and in Jamaica, can be explained only partly in numerical terms. The enormity of the social consequences and the health risks associated with the phenomenon justify the concern in both societies.

In Jamaica, the problem is especially acute. The full impact of the threat is more fully understood vis-a-vis the youthfulness of the society. Currently, social awareness has not been translated into programmes to prevent the increase of adolescent child-bearing, or to counter its effects upon the society. The researcher takes the view that this failure is partly explained by the paucity of systematic research into the causes and effects of too-early child-bearing in Jamaica. Simultaneously, this study will add to the data already available to Jamaican policy makers, and suggest to practitioners in

that context, alternative ways of dealing with the problem.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

There are two major purposes of Chapter II. One purpose of the chapter is to describe the organization of the entire study. The chapter will also present a review of the literature related to the phenomenon of adolescent child-bearing and the associated problems.

Organization of the Study

There are six chapters to this study. Chapter I has presented the background to the study and a rationale for inquiring into the problem. Chapter II presents the review of the relevant literature. In Chapter III, the design of the study is presented. Chapter IV presents the proposed model and Chapter V presents the findings from, and discussion of the validation process. Chapter VI summarizes the study, presents recommendations for further action and conclusions based upon the researcher's perceptions of findings throughout the study.

Overview of the Problem

Adolescent child-bearing is a highly visible phenomenon which is of international concern (Hendrixson, 1979). Frisch (1980) also has commented upon the visibility of the phenomenon in Britain and other European countries, and Tsafrir (1974) and Powell (1978b) have observed the rise of the phenomenon in developing countries, including Jamaica.

Engstrom (1978) has indicated that as much as 20 per cent of the population increase in developing countries is attributable to adolescent fertility. The Alan Guttmacher Institute (AGI) (1976) has reported that the United States ranks fourth among selected developed and developing nations, in the proportion of adolescent pregnancies per adolescents in the population.

Most research on the problem has originated out of developed countries, thus limiting its generalizability in developing countries (Tsafrir, 1974). She continued that developing countries lack the information management systems to produce useful research data.

National commitment to resolving the problem is lacking both in Jamaica and the United States. This is observed in the absence of supporting national legislations and policies (Klerman, 1975). The current treatment approach is reactive, as opposed to the preventive interdisciplinary approach advocated by Morse, Johnson and Johnson (1979). The school has been cited as the most appropriate agency to co-ordinate strategies to counter the effects of adolescent childbearing.

Emphases in the Literature Review

The literature review will focus upon:

1. Establishing the status of the problem of adolescent childbearing in Jamaica and the United States.

2. Exploring the social, health and medical implications of the problem.

3. Documenting the approaches used to address the problem in

Jamaica and the United States.

Status of the Problem

Understanding the Problem

The wide media coverage of adolescent child-bearing in recent times (Franzblau, 1967; Baron, 1976), the aftermath of the liberation movements, evolution of the new morality, increased urbanization (Braen and Forbush, 1975), the high percentage of population under 20 years old and the decrease of family control (Powell, 1978b) are factors which have focused attention on adolescent child-bearing. Adolescent child-bearing is problematic only in light of other factors in the society. The availability or unavailability of adequate medical care (Powell, 1978b); Furstenberg, 1976) and provision of appropriate intervention strategies (Klerman, 1975) are factors which determine how problematic adolescent child-bearing is.

The medical risks accompanying adolescent child-bearing are multiplied and compounded as compared to child-bearing among older women. Nye (1978) suggests that the optimum child-bearing age is between 25 to 29. The further away from that age that reproduction takes place, the more risky it is for mothers and infants. Adolescent child-bearing is considered problematic also because of its visibility, frequency and rate of recidivism (Sarrel, 1967). The problem is exacerbated by the symptomatic approach to treatment.

Furstenberg (1976) advocates more research to establish a profile of too-early child-bearers. However, Hendrixson (1979) and Powell (1978b) have identified lack of medical prognosis and health care as

special problems associated with adolescent child-bearing.

Klerman and Jekel (1973) have noted that successive explanations of the adolescent child-bearing phenomenon have evolved over a fifty year period, beginning about the 1930's. Earlier explanations have been renounced in favour of the present one which recognizes economic status as the single most important causative factor linked with too-early child-bearing.

In summary, the problem of adolescent fertility is interpreted partly in terms of its high visibility, partly in terms of the medical risks involved, and partly in terms of the social costs.

Background to the Problem

Adolescent fertility became visible against a background of radical social change in the present century (Conger, 1971). Reiss (1976) concurs that changes in the degree of parental supervision and authoritarianism, expanding social networks among youths and the availability of contraceptives are contributing factors to the increase in adolescent premarital fertility and adolescent fertility in general. Klerman and Jekel (1973) and Conger (1971) commented upon the move towards intense urbanization which has contributed to the high visibility of adolescent fertility in the United States.

The national focus upon the inequities of minority groups in the United States during the 1960's also focused upon women as a new minority group (Baker, 1972). The focus upon women precipitated a redefinition of sex roles. Heffner (1978) noted that women sought to reject the feminine mystique and promote women's right to self-expression inside

and out of a sexual context. Heffner also observed that the liberation movements also promoted social and sexual double standards and inter-generational conflicts. Adult demand for youthful conformity confused youths regarding their role in society (Heffner, 1978; Powell, 1977). In retaliation, youths rejected the traditional values and evolved a new sexual morality.

The different rates of physiological and sociological maturation confuse present day adolescents (Chamberlin and Girona, 1970). Physiological development occurs earlier (Frisch, 1980) than social maturation which has been prolonged by enforced schooling and exclusion of adolescents from the labour force (Klerman, 1975). The inconsistency in maturation rates and subsequent conflicting social expectations confuse adolescents regarding their role relations in society.

The creation of the youth culture (Conger, 1971) and sensational sex (Baron, 1976) by the media are backgrounds for the prominence of adolescent fertility. Television has had major impact on formation of adolescent sexual values; its impact is intensified by the lack of any other mass portrayal of countering values in the media.

Powell (1978b), Sadler (1978) and Osofsky (1968) have observed the contributory effect that relaxation of traditional mechanisms of social control has had on adolescent fertility behaviours. Osofsky (1968) has also attributed increased adolescent fertility partly to the rise of individualism over concern for the group.

Trends in Adolescent Sexuality

Sorenson (1973) found in a national survey that most 13 to 19 year

olds were active within stable sexual relationships. The tendency was for adolescents between 16 to 19 years old to be more active than adolescents below that age; and for boys to be more active than girls. Page (1967) claimed an increase in adolescent sexuality between 1940 (7.1%) and 1960 (21.6%). Zelnik and Kantner (1978a) found that the proportion of sexually active adolescents in the 15 to 19 age group had increased between 1971 (30%) and 1976 (40%). Zelnik and Kantner also found an increase from 6.4 per cent in 1971, to 9.3 per cent in 1976, in the number of adolescents experiencing first pregnancies between ages 15 to 19 years. In Jamaica, Powell (1977) found in an urban study that by age 15 years, 33 per cent of the subjects had initiated their sexual experiences; twice that number were sexually active at 16 years of age. Verner (1975) reported that a Michigan study of white, middle class, non-metropolitan youths revealed an increase in sexual activity over a four year period: whereas in 1970, 27.8 per cent and 16.1 per cent males in the 14 to 16 age group were sexually active, in 1973, 33.4 per cent and 22.4 per cent males and females, respectively, were sexually active.

Goldmeier (1976) and Menken (1972) acknowledge the declining trend in the United States population growth rate but concede this decline is not reflected in adolescent fertility rates. Menken (1972) reported a three per cent increase in the adolescent fertility rate between 1961 to 1964. Demographic observations made by Goldmeier (1976) and Menken (1972) have been supported by Baldwin (1978) and Howard (1978). Baldwin (1978) reported that whereas adolescents were responsible for 14 per cent of the population increase in 1960, by 1974, they were responsible

for 19 per cent of that increase.

Baldwin (1978), Howard (1978) and Moore (1977) have reported that the birth rate among older adolescents (17-19 years) has declined, beginning in the 1970's. However, they also observed that the increased fertility rates for adolescents below 17 years old have cancelled out the fertility decline for adolescents as a sub-population. Powell (1978a) and Roberts (1974) have reported the increasing significance of adolescent birth rates to the Jamaican population. By extrapolating from the results of one urban study, Powell (1977) claimed that between 1973 and 1975 the adolescent contribution to the annual population increase had moved from 25 per cent to 33 per cent.

Powell (1978a; 1977), Roberts (1974) and Blake (1961) have reported on the frequency of premarital sexual activity among Jamaican women. Powell (1977) attributes the high frequency of premarital sexual activity and accelerated too-early child-bearing in part to the prevalence of the *visiting union. Nye (1978) by citing United States census figures (1975; 1973) has also observed an increase in the rate of illegitimacy. Whereas the illegitimacy rate was one of every 30 new births (3.3%) in 1940, by 1973 the rate was one of every eight new births (18.5%). Findings by Zelnik and Kanter (1978a) indicate an increase (from 6.4% to 9.3%) in adolescent sexual activity between 1971 and 1976. Baldwin (1978) has also reported a 52 per cent increase in the illegitimacy rate, per 1000 women under 20 years old. Baldwin reports that the number of illegitimate births has doubled in absolute terms also.

Early biological maturation has been offered as a major factor accounting for the accelerated pace of child-bearing in adolescent women.

* A union type within the Caribbean family structures.

The falling age of menarche has been cited as a primary causative factor by Roberts and Sinclair (1978), Frisch (1980). Goldmeier (1976) explained that with improved diet and greater availability of medical care, physiological maturation occurs earlier in adolescents. Earlier fecundity combined with the earlier age at which sexual experimentation begins has contributed to the increasing trend in early child-bearing among adolescent women.

Magnitude of the Problem

The magnitude of the problem of adolescent pregnancy is circumscribed by the perception of what the real problem is. Hathcher, Stewart, Stewart, Guest, Schwartz and Jones (1980; 175) maintain that it is important that the problem be clearly articulated since perception and articulation determines the specific approach to its resolution. Hatcher et al. (1980) continued that the severity of the problem may be construed relative to its numerical significance, its growth rate, marital status of adolescent child-bearers and/or the inherent medical and social implications. The United States currently has the fifth highest adolescent child-bearing rate of all developed countries (Alan Guttmacher Institude (AGI) (1976). The fertility rate among women under 20 years old has increased continuously since the 1940's, despite the decline in the growth rate of the general population of the United States (Menken, 1972; Baldwin, 1978). Currently 10 per cent of all women experience a first pregnancy by the time they are 17 years old and 25 per cent of all 19 year old women in the United States have experienced a first pregnancy (AGI, 1976). Moore (1977) estimates that in 1977,

adolescents were responsible for 20 per cent of all live births in the United States. In 1977, adolescents in Jamaica were responsible for 30 per cent of all live births (Powell, 1978b). Simultaneous with the percentage increase, the actual numbers of adolescent pregnancies has risen also, both in Jamaica (Powell, 1977; Roberts, 1974) and in the United States (Baldwin, 1978). The numerical increase is problematic to the extent that the number of adolescents in the populations of Jamaica and the United States is increasing (Department of Statistics, Jamaica, 1977 and Baldwin, 1978), thus increasing the adolescent proportion of both populations.

Much recent attention has focused upon the increase in the frequency of adolescent pregnancies as far as the phenomenon threatens the stability of the nuclear family and other social institutions (Furstenberg, 1976; Klerman and Jekel, 1973). The increasing numbers of illegitimate births (Nye, 1978); the fact that the fastest rate of increase in adolescent births is among white adolescents (Lipsitz, 1980); the decreased age for first coitus and increased sexual activity among adolescents (Furstenberg and Crawford, 1980) are factors by which the magnitude of the problem is circumscribed.

The gravity of the problem must be understood vis-a-vis the social (Powell, 1978b) and medical (Mednick, 1979) implications. The effectiveness of the method selected to address the problem also determines the real and potential magnitude of the problem of adolescent child-bearing (Klerman and Jekel, 1973).

Implications of the Problem

Adolescent child-bearing implies medical and social risks for the mother and the infant. The social costs are also dispersed to the significant others of the adolescent mother, and to the society generally. Both medical and health risks are associated with, and intensified by determining social and economic factors.

Maternal Medical Risk

Risk to adolescent maternal health is correlated with factors of age, socio-economic status and race (Mednick, 1979). The possibility of incomplete physiological development in adolescent child-bearers increases their health risks. Incomplete physiological development in pregnant adolescents increases risks to both maternal and infant health. Menken (1972) has found that infant mortality is highest among young adolescents (below 15 years) and lowest among women in their twenties.

Mednick (1979) has suggested that the socio-economic background of the adolescent mother determines her nutritional standard and accessibility to medical care. When these factors apply, they also determine maternal health. Menken (1978) has also found that infant mortality is a function of illegitimacy when ill gitimacy is in turn a function of socio-economic status. The socio-economic status of the non-white adolescent, more than the white adolescent, is likely to preclude her accessibility to medical care during the first trimester of pregnancy.

Maternal mortality has declined sharply but continues to be very high contends Menken (1972). The AGI (1976) reports that mortality

occurs to 60 per cent and 13 per cent of the pregnant adolescents below 15 years, and between 15 to 19 years old, respectively.

Pre-natal care. Baldwin and Cain (1980), Mednick (1979) and Wedderburn (1973) assert that the availability of pre-natal care is a critical determinant on the health outcome of the adolescent pregnancy. They claim that this factor could cancel out the negative effect of age per se. However, Powell (1978b) and Arehart-Treichel (1978) concur that adolescents often fail to procure medical attention prior to the second trimester of pregnancy.

Medical disorders are usually more prevalent among adolescent mothers than among older women. Sadler (1978) has also linked the occurrence of cervical cancer with early child-bearing in Jamaica.

Infant Health Risks

Infants of adolescent mothers are more likely than infants of older mothers, to suffer from severe congenital mental and physical defects (Sadler, 1978). These defects are linked with low birthweight and foetal underdevelopment (Winnick, 1978; Nye, 1978). Sadler found low birthweight to be a function of the mother's age. Whereas she found 29.9 per cent low birthweight babies among women under 20 years old; she found 15.3 per cent low birthweight among older mothers. The tendency was also for older adolescents to produce fewer low birthweight babies than did younger adolescents.

Bruce (1978) reports that the chances of neurologic defects and mental retardation are four times greater among infants of adolescent parents. Blindness, epilepsy, cerebral palsy have been reported increasingly among such children (Sadler, 1978).

Cognitive development is reportedly retarded among children of adolescent parents. Infants tested on the Bayley Scales of Infant Development and the Weschsler Intelligence Scale for Children have reported lower scores. Children of adolescent parents have also reported lower scores on the Stanford-Binet tests than children of older mothers (Baldwin and Cain, 1980; Flick, Schaefer and Siegel, 1979; Furstenberg, 1978; and Nye, 1978).

Maternal Social Risks

Adolescent child-bearing poses severe social risks for the parents, the children and significant others related to the incidence. There are also direct and indirect costs which must be made up by the society.

Chilman (1977) and Campbell (1968) describe adolescent child-bearers as socially disadvantaged. Adolescent child-bearing arrests the socialization of adolescents, especially where they are primarily responsible for the child-rearing functions (Furstenberg, 1976).

Educational disadvantage. Archer (1980), Ministry of Education (1976-1977; p. 60), Trussel (1976) and Braen and Forbush (1975) cite adolescent child-bearing as a major cause of premature termination of schooling. The AGI (1976) report that 80 per cent of the young women who become pregnant in high school never complete their secondary education. Furstenberg (1976) found that when pregnancy occurred between age 13 to 15 years, 11 per cent of the impregnated students are likely to complete secondary schooling, compared to a possible 39 per cent from among those who delay a first pregnancy until after age 18 years. The highest high school graduation rate of 42 per cent is achieved by

..omen who delay pregnancy until after age 20 years. By comparison, Trussel (1976) found that only 18 per cent of the young women who were impregnated by age 18 graduated from high school. By contrast, he found that 57 per cent of the women who delayed their first pregnancy until after age 18 graduated from high school. Card and Wise (1978) also found that graduation from college was more difficult for adolescent child-bearers than for their non-pregnated classmates.

Economic disability. The prospect for economic self-sufficiency is severely diminished for adolescent parents. Card and Wise (1978) found in a longitudinal study that the negative economic impact of adolescent child-rearing is prolonged and not easily eliminated. Card and Wise (1978) found that over time, adolescent parents were more likely than their non-parent classmates to occupy low paying jobs and experience high degrees of job dissatisfaction. Powell (1978b) substantiates Card and Wise's finding that the negative impact of early child-bearing was more pervasive among females than males. Furstenberg (1976) found that five years after experiencing their first births, 66 per cent of the mothers had major economic responsibility for their family. However, only 50 per cent of the sample were employed and 60 per cent were in precarious economic positions. By contrast, 15 per cent of the non-pregnated classmates were economically dependent.

Social mobility. Chances for upward social mobility are severely restricted among adolescent child-bearers. Powell (1978b), Sadler (1978) and Card and Wise (1978) have noted that adolescent child-bearers are socially discriminated against. Powell (1978b) claims that discrimination exists against the pregnant adolescent at the workplace, through

social censorship and ostracism and through denial of social services. Campbell (1968) asserts that the social destiny of an adolescent child-bearer is pre-determined by a pregnancy, especially if that pregnancy occurs by age 16. Powell (1978b) disputes the determinism, advocating programme and policy interventions to avert the social tragedies which Campbell predicts.

Limitations on upward social mobility is further intensified by the increasing tendency for more adolescent mothers to rear their children rather than place them for adoption (Moore and Waite, 1977). Similarly their lower educational levels and consequent lower employability adversely affect their chances for upward social mobility (Furstenberg, 1976).

Infant Social Risks

Wantedness. David (1972) explains wantedness in terms of the degree to which a pregnancy is consciously desired. He continued that the degree of wantedness may change, usually favourably, between conception and birth. Where there is still a strong negative feeling towards the pregnancy during gestation, the result is an unwanted child. Powell (1977) and Furstenberg (1976) found that pregnant adolescents experienced strong feelings of unwantedness for their pregnancies. Most times these feelings changed to resignation or acceptance, rarely to exuberance.

Shah, Zelnik and Kanter (1975) found from one study that 16 per cent of adolescent pregnancies were wanted and an even smaller number had been planned. Powell (1977) found that 90 per cent of the young women in her study had not seriously contemplated the implications of

pregnancy, prior to the incident.

David (1972) suggests that the quality of life of unwanted children begins below that of other children. Unwantedness precipitates problems of child neglect and abuse. Nye (1978) observes that child abuse is a significant problem among adolescent parents, especially fathers, whose ignorance of child development frustrates them in the child-rearing process. Brodber (1974), links the incidence of child abandonment in Jamaica with the economic frustration of parents.

Social disadvantages. Baldwin and Cain (1980) suggest that the social disadvantages of children of adolescent parents are intensified when those parents are solely responsible for child-rearing. Children of adolescent parents are likely to spend most of their childhood in one-parent homes and to perpetuate the cycle of early parenthood. Such children are also likely to experience more problems in their socio-emotional adjustments, partly as a result of the quality of early parent-child interactions. Flick, et al. (1979) report that adolescent mothers tended to vocalize less, and show less emotional involvement with their infants. Nye (1978) also, reports that children of adolescent parents usually suffer from developmental problems resulting in cognitive and social retardation. Such children also suffer from socio-emotional maladjustment resulting in dependency behaviours.

Recidivism. The economic deprivation and lack of chances for upward social mobility of adolescent parents directly affect the social advantages of their children. Powell (1978a), Braen and Forbush (1975) and Roberts (1974) have each remarked upon the lack of fertility control among women who initiate their child-bearing careers as adolescents.

Such women exhibit the tendency toward larger completed family sizes and shorter birth intervals than women who delay child-bearing until after they are twenty years old.

Lowe (1976) reported recividism rates of 18 per cent, 50 per cent and 100 per cent over follow up periods of 6 months, two years and five years respectively. Furstenberg (1976) found that at the end of a five year follow up, 85 per cent of the subjects had experienced a subsequent pregnancy. Sarrel and Davis (1966) found a recividism rate of 95 per cent after five years, where intervention strategies were not implemented. Moore (1978) remarked upon the tendency for subsequent pregnancies to occur in rapid succession to an early first pregnancy and Trussel and Menken (1978) concurred that age is a decisive factor in completed family size.

According to Zelnik (1980), the recividism rate among adolescent child-bearers has declined between 1971 and 1976. Whereas in 1971 the repeat pregnancy rate over a one year period was 22 per cent, and 50 per cent over two years, by 1976 the repeat pregnancy rates were 15 per cent and 30 per cent over similar periods. Zelnik found that race and age were two factors affecting recividism. At both check points, older and white adolescents experienced fewer second pregnancies than younger and black adolescents. Zelnik attributed the lower recividism to greater contraceptive use.

Impact on the Family

Adolescent child-bearing has tri-generational economic and social impact (Powell, 1978b). Lampart, cited by Intercom (1978) supports

Powell's observation. Baldwin and Cain (1980) have observed that the family support system is important to, and affects the developmental outcomes of infants of adolescent parents. Maternal families are particularly important in the child-rearing function (Powell, 1978b; Smith, 1975; Bryan-Logan and Dancy, 1974). These authors have also commented upon the emotional disruption and subsequent adjustment that families of adolescent primigravidae face.

Economic cost. Powell (1978b) and Lampart cited by Intercom, have alluded to the economic costs of adolescent child-rearing to the families of the adolescents concerned. Powell has stated that the standard of living of such families is likely to fall. Wedderburn (1973) also commented upon the economic distress that is involved for the extended family that assumes child-rearing responsibilities in adolescent childbearing.

Admitting the lack of conclusive data, Furstenberg and Crawford (1980) cited studies which suggest that siblings of adolescent mothers experience social adjustment problems, marital instability and higher levels of fertility, more often than other siblings.

Premarital pregnancies are not unconditionally acceptable to minority families of adolescent child-bearers, despite the supportiveness of such families (Furstenberg, 1976; Smith, 1975). Bryan-Logan and Dancy found that premarital adolescent pregnancies evoked guilt feelings in mothers of the pregnant adolescents.

Impact on Fathers

Ogg (1978) suggests that adolescent fathers frequently are not

included in the decision-making processes related to adolescent pregnancies. However, she suggests, unplanned pregnancies are often equally traumatic for the adolescent partner as for the pregnant adolescent.

Card and Wise (1978) suggest that adolescent pregnancies have an economic effect upon fathers as well as mothers, when compared with their classmates who have delayed child-bearing. Nye (1978) suggests that adolescent fathers less frequently experience educational interruption or premature termination of their education. He continues that their economic commitment to child-rearing is less than the mothers', and lessens over time.

Powell (1978b) and Lampart, cited by Intercom (1978), have observed a similar detachment in alleged fathers of adolescent pregnancies in Jamaica. The Ministry of Education, Jamaica (1979), Knight (1980) and Archer (1980) have also indicated that older out-of-school males are usually responsible for adolescent pregnancies in Jamaica.

Public Costs

Furstenberg (1976), Nye (1978), and McAnarney (1975) all concur that public costs in the support of adolescent child-rearing are extensive. In addition to the monetary expenditures, public costs must include the macro-economic effects of under- or unemployment, occasioned by adolescent fertility.

Welfare dependency. Nye (1978) suggests that adolescent parents are likely to establish a dependency syndrome on parental support and public welfare. Bacon (1974) cited by Nye (1978), claims that 31 per cent of those women who experienced a first birth before age 16 years,

compared to 11 per cent who delayed their first birth until after age 18 years, were dependent on welfare. Moore (1978) has reported findings from a United States survey (1975) which indicate that approximately one half ($4.6 m) of the Aid to Families of Dependent Children disbursement was awarded to women who became mothers before age 16 years. Arehart-Treichel (1978) has reported that each adolescent pregnancy brought to term requires an expenditure of approximately $8,170 yearly in federal, state and local government funds and Powell (1978b) has observed that the society is required to subsidize the economic maintenance of families of adolescent parents.

Klerman and Jekel (1973) suggest that the economic dependency of adolescent parents is racially differentiated. Klerman and Jekel claim that the cultural norms of blacks preclude resort to marriage and adoption as viable ways of resolving adolescent pregnancies.

Economic effects. Trussel (1976) suggests that adolescent child-bearing creates a micro- and a macro-economic effect. The micro-economic consequences may be reckoned in terms of the differential economic productivity of persons who initiate child-bearing and those who delay the onset of child-bearing past adolescence. Macro-economic effects are considered in terms of the differences between the actual and the potential economic productivity of the early and the late child-bearer. Powell (1978a) and Moore (1978) have observed that the labour force participation of early child-bearers is much lower than non-child-bearing peers because of the lower educational levels and the higher fertility behaviours of the early child-bearers. Trussel (1976) also commented upon the ability of early child-bearers to reduce the participation of

women in economic activities. This reduction ultimately has a negative effect upon the society's ability to accumulate human capital resources. Powell (1976) argues that rural Jamaican women are actively engaged in economic activities despite their high fertility rates. However, she contends that over-all, women are under-represented in public life and high-powered economic activities and decision-making, partly due to their family building pre-occupation.

Marital instability. The majority of adolescent births still occur within marriage (Baldwin, 1978). However, Moore (1978), Barnes (1978) and Nye (1978) claim the divorce rate for premaritally pregnant adolescents is twice as high as the overall rate for the United States. Nye (1978) claims that 80 per cent of the adolescent marriages contracted after conception end in divorce. Nye contends that such marriages have the capacity for adding a conflict factor without reducing public expenditures for their maintenance.

Marriages used to legitimize pregnancies have the additional disadvantages of depressing educational advancement (Moore & Waite, 1978; Nye, 1978). Smith (1980) also found that early marriages tended to increase fertility rates among women who experienced early first pregnancies.

Zelnik and Kantner (1978a) and Klerman and Jekel (1973) found that more whites than non-whites tend to resolve premarital pregnancies through marriages. Menken (1972) found that older adolescents tended to marry after a conception than were younger adolescents. Sadler (1978) indicated that Jamaican adolescents tended to resort to abortions more than to marriages to resolve premarital pregnancies.

Demographic effects. Easterlin (1980) and Wedderburn (1973) both

advocate population control in developing countries in order to more nearly equate population size with available economic resources in these countries. In Jamaica, Powell (1978a) also advocates population control. Powell (1978a), Roberts (1974), Baldwin (1978) have reported that adolescents are the major contributors to population increase in Jamaica and the United States, presently.

Trussel and Menken (1978), Powell (1978a) and Roberts (1974) make a positive correlation between early child-bearing and completed family size. Trussel and Menken (1972) attribute the racial differential in completed family size to age at first birth, rather than to genetic variables.

Sadler (1978) and Powell (1978b) both observed that delaying the age of first birth and increasing birth intervals could be effective population controls. However, adolescent child-bearers lack the ability to use either form of control (Furstenberg, 1976), unless intervention strategies are implemented (Zelnik and Kantner, 1978b).

Powell (1978a) has alluded to the effect of adolescent fertility and non-residential unions on producing a skew in the Jamaican population with the skewness occurring at the lower end of the age scale. Overall population control could be more efficiently achieved by punitive deterrents to fertility increase advocates (Easterlin, 1980).

Status of Women

Bernard (1973) submits that male domination of heterosexual relationships was legitimized by capital investment in the relationships. The system of male inheritance of the nineteenth century also legitimized

males as mate selectors and subordinated females (Chilman, 1974), giving rise to the sexual stereotype of female inferiority.

The procreative capacity of women has traditionally been the primary measure of their social value (Heffner, 1978). Women have subscribed to this perception by linking their self-concept to their ability to bear children (Evans, 1977; Powell, 1976). Zonker (1977) found that pregnant adolescents demonstrated lower self-concept on a measurement of psychological profile than non-pregnated adolescents.

Low self-esteem and the stereotyped procreative role have curtailed female participation in economically rewarding activities and fostered their economic and psychological dependence (Women's Bureau, Jamaica, 1979; Powell, 1978a). Adolescent fertility expands the magnitude of female dependency and creates a negative impact on the status of women in Jamaica (Powell, 1978a).

Recapitulation

The rate of adolescent child-bearing has escalated in Jamaica (Powell, 1978a; Roberts and Sinclair, 1978) and in the United States (Baldwin, 1978) over the last 50 years. A moderate decline has taken place in the birth rate of older adolescents but the birth rate increase for the adolescent population has overshadowed the decline (Baldwin, 1978; Roberts and Sinclair, 1978). Adolescent child-bearing is highly visible because of the simultaneous occurrence of the phenomenon along with other fundamental social and demographic changes.

Both social (Furstenberg, 1976) and medical risks (Baldwin, 1980; Wedderburn, 1973) accompany the phenomenon. These risks may be

minimized by the implementation of intervention strategies (Sarrel and Davis, 1968). Remedial strategies necessitate a preventive approach and pro-active social policies in order to effectively address the implication of adolescent child-bearing for the society (Ogg, 1978; Klerman, 1975).

Current Responses to the Problem

Approach to Resolving the Problem

Legislative changes and policy formulation at the level of the societal supra-structure, are necessary to create desirable mass impact on the problem of adolescent child-bearing (Klerman, 1975). Klerman also advocates broad social policies over mere coping strategies. Osofsky (1968) advocates an interdisciplinary approach to addressing the problem. The school has been cited as the single most appropriate agency to initiate or monitor pro-active type responses to the problem (Jacobson, 1976).

Social awareness. Klerman (1975) has observed that the societal approach taken to the problem of early motherhood is partly indicative of the value system of the society. Klerman maintains that a punitive approach to the problem of adolescent sexuality is ineffective and counter-productive.

Preventive Approach to Resolution

Barnes (1978) and Braen and Forbush (1975) advocate the development of preventive approaches to resolving the problem of adolescent motherhood. Such approaches would be concerned with preparing adolescents for

responsible behaviours in sexual and non-sexual relationships (Barnes, 1978). Bruce (1978) advocates the view that helping susceptible adolescents to develop positive self-images should be a task of the preventive approach.

Sex or family life education. Kerr (1961), cited by Brody (1974), and Roberts and Sinclair (1978), reported upon the lack of knowledge regarding human sexuality and reproduction found among Jamaican adolescents. Reichelt and Wereley (1975) and Sorenson (1973) also found similar lack of knowledge among samples of United States adolescents. Blake (1973) and the Alan Guttmacher Institute (1976) found that public opinion favoured the inclusion of sex or family life education in the secondary school curriculum. The Alan Guttmacher Institute also reported that six states and the District of Columbia have mandated the teaching of sex education in public high schools. However, Ogg (1978) has observed that 60 per cent of the school districts in these states prohibit instruction in birth control or family life education. Gordon, Scales, and Everly (1979) have suggested that the school's argument. for protective ignorance is irrelevant in light of a Gallup Poll report of 77 per cent public opinion in support of teaching sex education in high schools. Gordon et al. (1979) suggest that inclusion of sex education in high school is important in view of findings that parents are usually either unwilling or unable to educate their children in sexual matters.

Contraception

The adolescent disposition to practice contraception is linked with

variables of sex (Sorenson, 1973), race, age, self-concept (Zelnik and Kantner, 1978b), educational achievement (Trussel and Menken, 1978), socio-economic status (Lyle and Segal, 1979) and birth order (Bedger, 1980). Sorenson reported that male subjects in his national survey were less willing to use contraceptives than were the females. Furstenberg (1976) found that the reponsibility for making decisions related to contraception was ceded to the female partner. Zelnik and Kantner (1978b) found that older and white adolescents, as two distinct sug-categories, were more likely to practice contraception than younger non-white adolescents. They also found that the longer the first coital experience was delayed, the more likely that adolescents would use a scientific method of contraception. The level of educational achievement or the educational aspiration was found by Trussel and Menken (1978) to be key determinants of whether or not adolescents risked unprotected sexual intercourse. Both Bedger (1980) and Furstenberg (1976) found that young women were more willing to use contraceptives after having experienced a first pregnancy. Furstenberg (1976) and Zelnik and Kantner (1978b) also found that guilt feelings arising from their early socialization, prohibited greater contraceptive use effectiveness among adolescents.

Dryfoos and Heisler (1978) have indicated that up to 1975, 71 per cent of the adolescents between 15 to 19 years old who were susceptible to pregnancy, did not receive family planning services. They also report that only 30 per cent of the adolescent women at risk practice effective contraceptive use. Shah, Zelnik and Kantner (1975) report an 80 per cent rate of adolescent sexual activity compared with a 30 per

cent rate of contraceptive use.

Factors associated with non-use of contraceptives by adolescents include ignorance of the reproductive and menstrual processes (Roberts & Sinclair, 1978). Powell (1977) claims the missing knowledge is essential for adolescents to cope with their sexuality. Zelnik and Kantner (1978b) found adolescents objected to contraceptive use because they perceived contraceptives to be antithetical to the natural spontaneity of sex. Non-availability was also a factor associated with effective contraceptive use. Manber (1979) and Abernethy (1974) found that adolescent contraceptive use was retarded by difficult access to them or by the lack of privacy and confidentiality in attaining such contraceptives. Cultural norms (Brody, 1974) and early socialization (Zelnik, & Kantner, 1978b; Furstenberg, 1976) are deterrents from effective contraceptive use by adolescents. Zelnik and Kantner and Furstenberg found that the decision to use contraceptives evoked guilt feelings in adolescents and retarded effective application of contraceptive technology. Powell (1977) also found that social pressure on adolescents to deny their sexuality and taboos on premarital sexual intercourse led to non-use of contraceptives among Jamaican adolescents.

Powell (1978b) reported an increase of 100 per cent in the number of Jamaican adolescent users of contraceptives, between 1968 to 1971. However, the total number of adolescent contraceptors remains at about four per cent of the adolescent population at risk.

Reactive Approach to Resolution

Klerman (1975) advocates the creation of programmes to retain

adolescent parents in the mainstream. She opines that retention of the once-pregnant adolescent acts as a depressant on subsequent fertility. Her opinion is supported by Furstenberg (1976). Archart-Treichel (1978) emphasizes the need for programmes to soften the impact of adolescent parenting for all who are directly concerned. Braen and Forbush (1975) advocate creative, policy-based, systematic programmes rather than intermittent intervention-type strategies.

Pregnancy outcomes. Baldwin (1978) cites Campbell's three conception-birth categories. The three categories were examined over time periods 1960-1964 and 1970-1974. Campbell (1968) found that by 1974, 50 per cent of all births were in the category (a) conceived out of, but born into wedlock. Between the two periods, there was an increase of 140 per cent in the category (b) conceived and born out of wedlock. Older adolescents accounted for most of the birth increase in this category. The final category (c) marked those births which were conceived and born within marriage. Campbell found that 50 per cent of all adolescent births still occurred within marriage, regardless of the marital status at conception.

Hendrixson (1979) reported that in 1974, 34 per cent of all adolescent premarital pregnancies in the United States were legitimized by marriage prior to birth. Hendrixson also reported that 27 per cent of premarital pregnancies were prematurely terminated; 14 per cent ended in miscarriages and 21 per cent resulted in illegitimate births.

The Alan Guttmacher Institute (1976) reported that 30 per cent of the abortions in the United States were to adolescents. On the basis of one study, Sengupta (1977) reported that 20 per cent of the abortions

in Jamaica are among adolescents. However, undercounting in those figures is recognized by Sadler (1978) and Sengupta, due to the illegality of abortions and the unavailability of reliable statistics.

Arehart-Treichel (1978) and Smith (1975) concur that approximately 85 per cent of adolescent parents in the United States presently choose single parenthood. By comparison, as many as 50 per cent of adolescent parents kept their illegitimate babies prior to the 1970's. Zelnik and Kantner (1974) found that about 18 per cent and two per cent of white and black babies, respectively, were offered for adoption.

Delivery Modes

Important considerations in development of programmes to alleviate the adverse effects of adolescent child-bearing include relevance and flexibility (Klerman, 1975). Braen and Forbush (1975) disclaim any one best mode of service delivery but advocate programme components capable of motivating adolescents towards educational achievement and economic self-sufficiency. Smith (1979) and Klein (1975) have debated the advantages of the alternative and mainstreamed modes of service delivery. Arehart-Treichel (1978) has advocated comprehensive services in order to create the most impact on the problem of adolescent child-bearing.

Summary

The literature reivew has established that the phenomenon of adolescent child-bearing is not new, neither in Jamaica nor the United States. Emergent social factors and demographic characteristics have merged to focus on the phenomenon and to cause its problematic interpretation.

There was marked concern in the literature regarding the escalation of adolescent illegitimacy, perhaps, moreso than the concern regarding the problem of adolescent child-bearing per se. The position maintained in this study is that the generic problem presents a greater threat to the established social order than illegitimacy itself. The negative economic and population effects which are by-products of adolescent child-bearing, are in the researcher's opinion more socially deleterious than the threat to the nuclear family type. For that reason, she maintains the preoccupation with the sub-problem is misplaced.

The prevalent treatment approach both in Jamaica and the United States seems to be mostly reactive and symptomatic. The social structures and policy-making institutions demonstrate remarkable inflexibility and myopia as far as perceiving the full extent of the problem and subsequent formulation of systematic approaches for its resolution or alleviation.

It appears that the sexual double standards in Jamaica and the United States militate against objective perception and effective treatment of the problem. Based upon the review of the literature, it also appears that the present treatment response in both societies is crisis-oriented and fails to address the causes of the problem. There is also an apparent lack of commitment to the resolution of the problem, as seen in the absence of broad-based supporting policies.

From the literature review, it is reasonable to suggest that the resolution of the problem of adolescent child-bearing is severely impeded by the serious lack of research in various aspects of the problem.

The major purpose in Chapter II was to present a comprehensive

review of the literature related to adolescent child-bearing in Jamaica and the United States. The chapter also presented an overview of the entire study.

CHAPTER III

DESIGN OF THE STUDY

Introduction

Chapter III contains two major sections. The first section discusses the purpose of the study and the second section pertains to the procedural steps in the design.

Purpose of the Study

Isolated attempts have been made to address the problem of pregnancy-related drop-out from Jamaican secondary schools but these attempts have been made outside of the school system. The literature review supports the view that a systematic approach to resolving the problems associated with the high incidence of adolescent pregnancies do have positive results, if the approach is taken by and co-ordinated through the school system. Short-term benefits of adopting the systematic approach would include the increased ability of the school system to offer uninterrupted educational opportunities to the school-age parent. In the long-run, schools can effectively help to reduce the frequency of adolescent pregnancies and the adverse social impact of such pregnancies.

This study has been designed primarily to propose a model for retaining pregnant adolescents and school-age parents in Jamaican secondary schools. The model is presented in Chapter IV.

Procedural Steps

The plan for the design of the model comprised several distinct, sequential procedures. The three steps included:

1. survey of existing programmes
2. creation of the model
3. validation of the model

These steps are discussed in the following sections of this chapter.

Survey of Existing Programmes

Through the review of the literature on too-early child-bearing, internship, and other academically-related experiences, the researcher became aware of different types of programmes which have been developed to address the problems associated with too-early child-bearing. These programmes have reported varying measures of success in alleviating the problem. The researcher undertook to study a sample of such programmes in Michigan. The findings from that study (see pp. 85-101) were intended to be used in the development of the proposed model to control pregnancy-related school drop-out in Jamaica.

Programme population. The population of programmes to be sampled was limited to those in Michigan. This state was chosen because it has a well-established network of programmes. Also, Michigan was selected because this state has legally recognized the need to provide pregnant adolescents and school-age parents with opportunities for continuing an uninterrupted education (Michigan, State of, 1976). Michigan was also convenient because the three categories of programme identifiable in the literature were represented in this state. The three categories of

programmes were derived according to the (a) primary source of funding, (b) administration and control, and (c) mode of service delivery.

In Michigan, programmes may receive primary funding from and through the public school system. Such programmes are invariably administered and controlled by the public school system and, may or may not be administered within the conventional school environment. Other programmes receive primary funding from private or public agencies other than the public school system. Such programmes may or may not be affiliated with the public school system. The administration and control of these programmes are functions of the sponsoring agency and partly of the public school system, depending on the nature of the programmes' affiliations with the school system. Service delivery in such programmes is usually in alternative settings.

The Michigan programmes for reducing the problem of adolescent child-bearing may be of accredited or non-accredited status. Accredited programmes are usually those offering comprehensive services to the adolescent parent. Non-accredited programmes offer only specific components of a comprehensive service design. The National Organization on Adolescent Pregnancy and Parenthood (NOAPP) has advocated comprehensive and co-ordinated service delivery to adolescent parents for a concerted impact upon the problem of adolescent child-bearing.

A current directory of programmes for pregnant adolescents and school-age parents in Michigan which was compiled by the Michigan Association Concerned with School-Age Parents (MACSAP, 1979-80) listed seventy (70) programmes which have been accredited by the Michigan Department of Education. Together, these programmes represent the three

categories which were formerly mentioned. These categories are: (I) School-based programmes which can be (a) alternative or (b) mainstreamed; (II) Agency-sponsored, which can be alternative only.

The number of programmes in each category is shown in the following table.

Table 3.1

Michigan Programmes by Categories

Category	Number	Per cent
Alternative	52	74.30
Mainstreamed	15	21.40
Agency-sponsored	3	4.30
TOTAL	70	100.00

Each of the programmes established its own guidelines for service delivery and consumption. The range of services vary with the individual programme.

Criteria for selection. In order to survey programmes with the different types of sponsorship and in each delivery mode it was necessary to include at least one programme from each category. In order that proper selection procedures be observed, the following criteria were developed.

1. Representativeness. The programmes had to represent each of the categories which had been previously identified in the study, regardless of the number of programmes in the category. The categoric representativeness was important to give the researcher "complete"

information regarding structuring and operation of Michigan programmes. The information was later used specifically in proposing the mode of service delivery which was advocated in the model.

2. Accessibility. The programmes' willingness to be studied and to give out information about its operation was critical. Demonstrated willingness to be studied ensured greater accuracy in the information that was collected.

3. Credibility. Each programme which was included had to have statewide credibility. Credibility was determined on the basis of: (a) The age of the programme (one year or more). A one-year period was considered adequate for most programmes of this type to straighten the organizational "kinks" and to settle to normal operation. (b) The number of students served by the programme. The actual number decided upon had to be at the discretion of the researcher. A programme serving less than twenty (20) students in a twelve month period may be rejected on the grounds that it would be unlikely to experience the range of problems that would be encountered in a situation as the model was designed to control. However, justification for inclusion may be found in other extenuating circumstances. (c) The impact of the programme on the problem under discussion. Programmes had to demonstrate that they had been effective in depressing the problems associated with adolescent child-bearing. Such demonstration was determined in collaboration between the writer and a programme expert. (d) And finally, the amount of collaboration between the programme and the community it operated.

Overall credibility of the programmes was determined by reference

to the Michigan Directory (MACSAP, 1979-80) and by conferring with three administrators with state and national recognition for their work with pregnant adolescents and school-age parents.

4. Services. Each programme had to be designed to offer comprehensive services for the education and care of school-age parents. In addition, the range of services offered had to be feasible for consideration for inclusion in the model which was designed for the Jamaican context.

Four programmes were identified for inclusion in the study. Two each from the public school-sponsored and agency-sponsored categories. One programme was mainstreamed and all had accredited status. No programme with non-accredited status was included because of their component specific nature, as opposed to the desired comprehensive approach.

The established criteria were carefully applied in considering programmes for inclusion. Table 3.2 shows the number of programmes which met the criteria as a percentage of programmes per category.

Table 3.2

Number of Programmes Meeting Criteria

Category	(a) Number in Category	(b) Number Meeting Criteria	(b) as percentage of (a)
Alternative	52	38	73%
Mainstreamed	15	10	67%
Agency-sponsored	3	3	100%
TOTAL	70	51	73%

Final selection of the four programmes depended on two factors: (a) how highly recommended each was and (b) proximity of each to the site from where the research was being conducted.

Data collection. Data collection at this stage of the design refers to the information from and about the selected Michigan programmes for pregnant adolescents and school-age parents.

Instrument development. The instrument used to collect the data was the Interview Schedule (see Appendix B) developed for the purpose. The items were designed to elicit information from each programme about (a) its development and structure, (b) the services offered, (c) the clientele served, (d) its funding, (e) administrative control, (f) community involvement, and (g) its perceived impact on the problem.

The instrument was administered to directors of the selected programmes in a series of personal interviews. Preparatory steps were taken to maximize each interview situation.

Pilot testing. The Interview Schedule was pilot tested with one programme which was not included in the final sample. Pilot testing was primarily to verify that the instrument was seeking information which was retrievable by the directors.

Following the pilot test and the assurance of the programmes' credibility (criterion #3) each director was contacted by telephone to ensure the openness of her or his programme to be studied (criterion #2). The telephone contact also served as an introduction of the study. A copy of the instrument was mailed to each administrator several days prior to the interview in order to alert her or him to the specific type of information being sought at the interview.

Data analysis. The data were analyzed using frequency distributions which were tabulated. A description of the programmes was also prepared from the data, and it has been included in Chapter IV of the study.

Creation of the Model

The model was created by combining various types of information. An extensive review of the literature on early child-bearing was conducted. This review subsequently provided the philosophical and theoretical bases of the model. The survey of selected Michigan programmes and reference to the known Jamaican case study (see Appendix C) provided supporting research data. Data from the programme survey were used as references in designing the components of the model. The researchers professional experience in the Jamaican educational system and her first-hand knowledge of the Jamaican society were also used as guidelines in estimating the feasibility of the model in the abstract. In summary, the model is a synthesis of information from different sources.

Model Validation

The final step in the design was the validation of the model. Bases for validation and a format were established prior to the actual validation process.

Bases of validation. Validation of the Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools (MRPA) took place in two related steps. These processes included

(a) validation of the model based upon the reactions of a special panel to the proposed MRPA and (b) consideration and discussion of conceptual adjustments to the model based upon the reactions of the panel.

In preparation to ensure scientific validation of the model, it was necessary to establish appropriate criteria for the selection of a panel. It was also necessary to develop a questionnaire (see Appendix E) to record and measure the reactions of the panel.

Selection criteria. Members of the validating panel were expected to conform to the following criteria:

1. Knowledgeability. Panelists had to be knowledgeable about the current Jamaican society and its educational system. Knowledge could have been gained by living, working, or studying in or about the society.

2. Expertise. Members of the panel must have demonstrated expertise in the field of adolescent sexuality through service, research or other scholarly pursuit. Examples of personnel likely to demonstrate such expertise include: (a) scholars, (b) school principals, (c) educational administrators at the national level, (d) school counsellors, (e) directors of programmes for school-age parents, and (f) administrators of the National Family Planning Agency.

3. Availability. Panelists had to be able to participate, coincident with the time frame of the study.

4. Group size. The panel had to be large enough to be representative but small enough to be manageable. It was decided that three to five members on the panel would be appropriate.

Instrument development. The Validation Questionnaire (see Appendix E)

was designed to record the reactions of the experts to the model. Development of the questionnaire followed the creation of the model. It was designed to elicit specific information about the appropriateness of the model in the Jamaican context.

Appropriateness was defined on two dimensions. These dimensions referred to the adequacy and feasibility of the model and the validators were required to rate given aspects of the model on scales of adequacy and feasibility. Adequacy in the context of the study referred to the degree to which the model was perceived to be capable of achieving its goals. Feasibility referred to potential for the viability of the model in the present structure of Jamaican secondary schools.

The questionnaire was self-administered by each respondent.

Reactions by the experts. Each member of the panel of experts was contacted by the researcher on several occasions. Prior to the actual validation, letters requesting their participation were sent to each member of the panel. Subsequently, validation materials including an extract of the model (pp. 101-153) and the Validation Questionnaire were sent to each member.

Tentative follow-up meetings with each member of the panel were also scheduled in the cover letters. These meetings were set to achieve the following objectives: (a) to secure 100 per cent return on the questionnaires and (b) to initiate discussion which could elaborate on the opinions expressed on the instrument.

Each member of the panel of experts self-recorded his or her responses to the questionnaire. Each item was analyzed and quantified according to the established categories and reported as frequency

distributions. General comments which were recorded on the questionnaire or at the meetings were used in the general discussions of the items to which they related.

Modification of the Model

The comments and observations of the validators formed the bases of the suggested modifications to the MRPA. The suggested modifications were not intended to alter the proposed MRPA drastically. However, each suggestion was considered in light of its potential for improving the model and for judging the soundness of the proposal.

Each suggested modification has been discussed in Chapter V.

Changes in Planned Methodology

The methodology of the design was carried out essentially as planned. One methodological change occurred in the procedures involved in collecting data from the directors of programmes in Michigan. Of the four personal interviews which were planned, two were conducted by telephone. Two directors were unavailable for personal interviews within the given time-frame.

The telephone interviews were considered appropariate in view of the type of data being collected. The lack of face-to-face contact was unlikely to affect the accuracy of the neutral data which were extractions of annual reports or other programme records. Originally, the interview technique was selected to expedite the data collection process and ensure a higher return rate: the telephone interviews were able to accomplish this objective equally well.

Validation of the model proceeded according to the design of the study. Five professionals working directly or indirectly with adolescents were selected for inclusion on the panel of experts Each member of the panel was knowledgeable of the problems associated with adolescent child-bearing in Jamaica, and met the other criteria for selection which were previously established.

Summary

Chapter III described the methodology which was used in developing the model for retaining pregnant adolescents and school-age parents in Jamaican secondary schools. This chapter set forth the procedures which were used to select programmes to be included in the study. Chapter III also described the procedures for validating the model.

Quantitative data were analyzed using frequency distributions and reported in tabular form.

CHAPTER IV

THE MODEL

Introduction

Chapter IV presents the Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools (MRPA). This is a change model which was also designed to create desirable changes in the present situation of adolescent child-bearing in Jamaica. The several stages and components of the model have been developed within a theoretical and sociological framework, with Jamaica as the context of the problem.

Restatement of the Problem

The increasing number of Jamaican adolescent mothers has been noted by Powell (1978) and Roberts (1974). Roberts and Sinclair (1978) have also found that the age of mothers at first birth has declined over the last ten to fifteen years. Cumper (1977) also has remarked that the proportion of adolescent mothers under fifteen years old has increased but these younger mothers have received less research and legislative attention than older adolescent mothers.

Adolescent child-bearing constitutes a problem for the society due to the medical and social consequences which are associated with the phenomenon. The increasing number of adolescent births has been associated with more birth defects, slower psychological development in children, and the prevalence of child abuse, neglect and abandonment.

Other social consequences have been associated with failure of pregnant adolescents to complete secondary education. Campbell (1965; p. 238) has observed that the pregnant adolescent has "90% of her life script written for her," primarily because of her reduced chances of ever completing high school. Archer (1980) made a similar observation in Jamaica, and Davidson (Canon, 1979) alluded to the potential threat of adolescent child-bearing to the stability of the society.

The need to control the problem of adolescent child-bearing is dramatized when that problem is considered vis-a-vis the socio-economic problems of overall unemployment; unemployment among specific groups such as women, school-leavers, and youths; and the high proportion of the population which is under 20 years old in Jamaica.

Effective control of the problem may be initiated through educational and other means. Retention of adolescent child-bearers in the school system could be an effective means of controlling the problem.

Need for Proposing the Model

It is the researcher's opinion that resolving the problems associated with adolescent child-bearing in Jamaica requires a deliberate plan of action. The available data on the problem in Jamaica indicate no apparent evidence of such a plan for controlling the problem.

The model which is being proposed represents a systematic approach to controlling the problem at the macro-level and more particularly a systematic approach to the problem of retaining adolescent child-bearers in the Jamaican school system. The model has integrated much of the current philosophy about adolescent sexuality, knowledge of the Jamaican

educational system and other relevant information about the Jamaican society into its theoretical and philosophical framework. Conceptually, the model serves to establish a relationship between the problem situation, the change agent and the supra-system.

Stages and Components of the Model

Stages

There are six stages in the conceptual development of the MRPA. These stages represent processes in the design and implementation of the model which is being proposed to counteract the problem of pregnancy-related school drop-out in Jamaica. Figure 4.1 illustrates these stages which are:

1. problem analysis
2. need definition
3. goal-setting
4. resource identification
5. implementation
6. control

These six stages are the result of an exploration of various sources in the literature on model development. Included among those sources are Wilson (1978), Havelock and Huberman (1978) and Lippit (1973). The information gathered from these sources has been synthesized along with the creative thinking of the researcher.

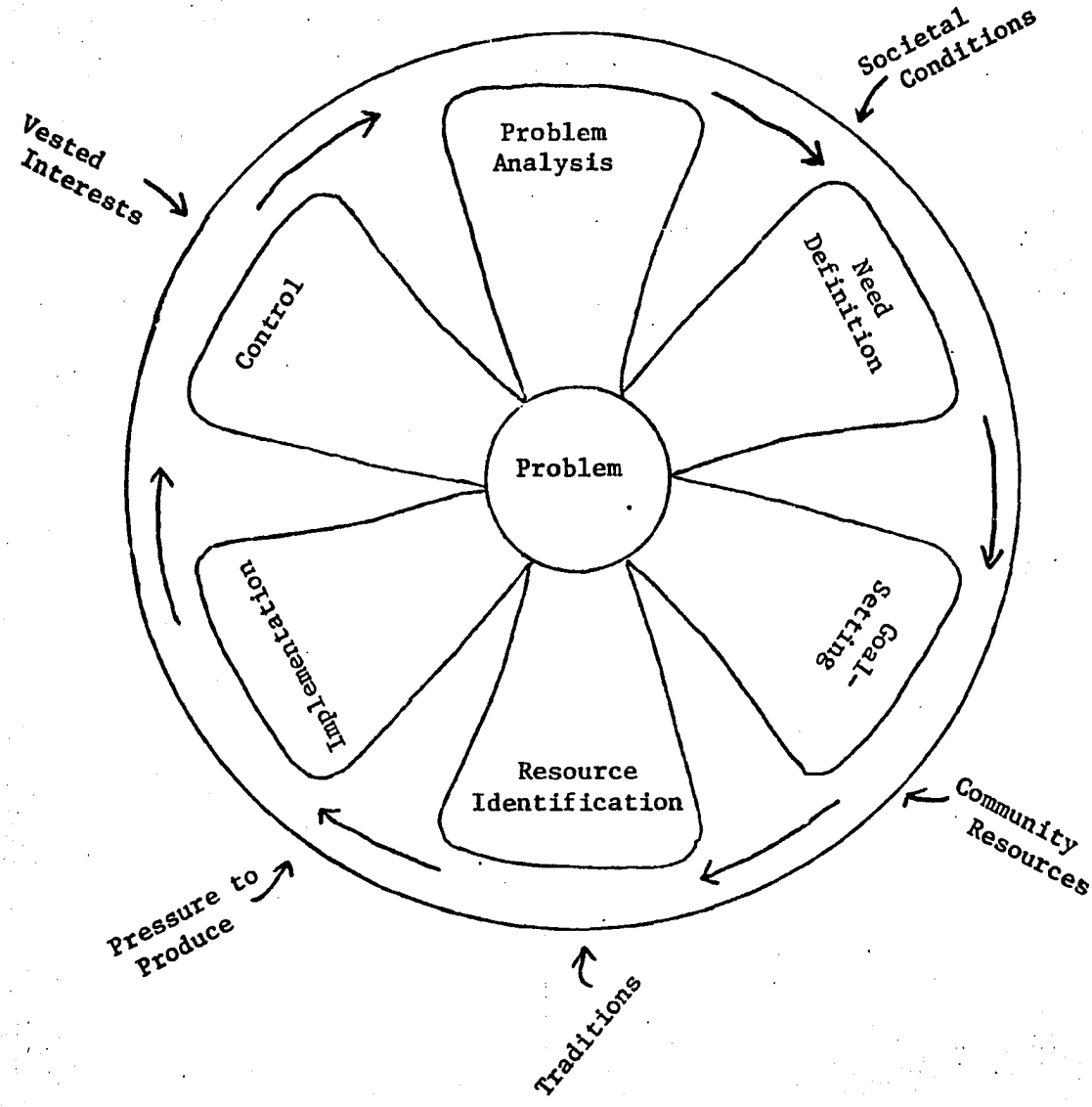


Figure 4.1

Stages in the Development of the Model

Following is a discussion of the various stages in the development of the model.

1. Problem analysis. Havelock and Huberman (1978) identify two structural components of a problem-solving configuration. The problem and the solution components of the configuration are inter-related as shown in Figure 4.2. Visualizing of both components and their inter-relatedness is necessary in the analytical stage of the change model to adequately conceptualize the entire change process.

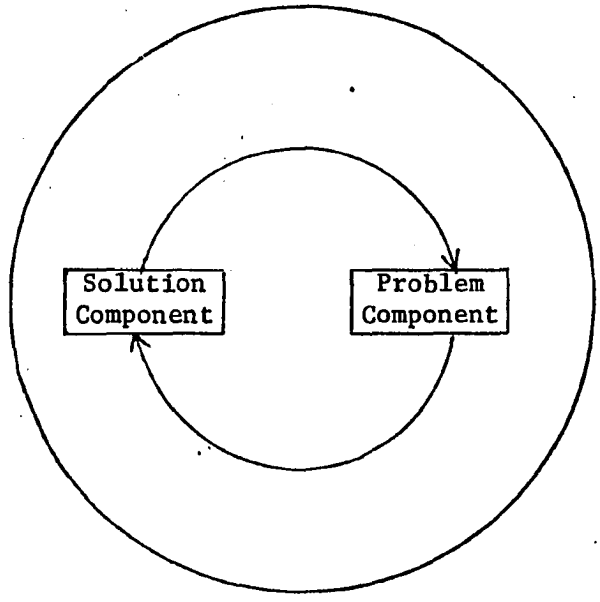


Figure 4.2

Simplest Model of a Problem-Solving Configuration

Source: Solving Educational Problems, 1978, p. 54, Havelock and Huberman.

A feature of this stage is diagnosis of the problem. The attempt is made to name and delimit the problem; to identify causes and to set the problem in perspective, relative to its environment. Generally,

this stage identifies the performance gap in the behaviour of the system in equilibrium, and synoptically assesses the possibility for causing dynamic disequilibrium and creating change.

The analytical stage of the MRPA explores the problem of adolescent child-bearing in Jamaica. It has been established in the research that adolescent child-bearing is a problem in this context. Documentation in this study shows that several factors are partially responsible. The numerical increase in the adolescent population over the last twenty years and the tendency for a slightly higher percentage of female adolescents in the population (Department of Statistics, Jamaica; 1977) are two other contributing factors. Simultaneously, fecundity is occurring at an earlier age in Jamaican adolescents due to the earlier age of menarche.

The above conditions result in undesirable increase in Jamaica's population; such increase being compounded by other undesirable social conditions. Roberts and Sinclair (1978) and Furstenberg (1976) indicate that women who begin their child-bearing careers at earlier ages tend to experience more pregnancies and at shorter intervals. These women also tend to exhibit less control over their child-bearing at later ages. Women in the former group also tend to have larger family sizes and at earlier ages. The demographic-results of such fertility behaviour are compounded by other characteristics of the Jamaican population. Fifty-three per cent of the population are under 20 years old (Department of Statistics, Jamaica, 1977; p. 6), resulting in a minority labour force having the responsibility for economic maintenance of the society. Another critical population characteristic is the high urban concentration

and the rapid rate of urbanization (Kaplan, 1976). Finally, the high rate of unemployment, particularly among youths, further compounds the socio-economic problems of the society, and is associated directly with the frequency of adolescent child-bearing.

2. Need definition. Wilson (1978) emphasizes need definition as an essential step in his cycle for systems analysis. During this stage the change agent or decision-maker identifies the tasks to be done. Havelock and Huberman (1978) allude to this stage as a critical period when certain needs surface vis-a-vis a group's reassessment of self and identity. The essential task at this stage is identification of needs with, and/or by the target of change. The MRPA also specifies the need to perceive the problem within its social context.

At the level of the supra-system, a need-gap exists between the society's demand for trained human resources and the actual supply of trained human resources. Prosser (1975) has noted that the pool of trained manpower in Jamaica has not grown much over the last ten years despite what appears to be an increasing need. Prosser explained that in some years there was a net loss of professional and technical personnel in the labour force, due to emigration and the selective immigration codes of receiving countries.

Also, at the level of the supra-system, the need exists for ways to improve the economic viability of sub-groups. Economic viability of such sub-groups would ultimately help to maintain social stability within the system. A United Nation's report (U.N. Report, 1980) revealed that in Jamaica 33 per cent of all households are headed by women. The U.N. report continued that there is a higher rate of unemployment

(37.7%) among women than among men (15.7%). These statistics are dramatized when considered in light of the fact that there is a slightly higher percentage of females (51%) in the total population (similar distribution exists in the 15 to 64 age group) (Department of Statistics, 1977). There are also indications that fewer women than men, expressed both as a percentage of the total population and a percentage of the labour force, are employed in high status positions.

The literature in the United States and in Jamaica has consistently linked unemployment among adolescent and young adult women with their failure to complete secondary education. Klein (1975) has indicated that as many as 90 per cent of all pregnant students under sixteen years old dropped out of school after delivery of their babies. In Jamaica, the Women's Bureau (U.N. Report, 1980) has suggested that the majority of all pregnant students drop out of school. They do not re-enter the educational system and, normally, they join the unemployed ranks. Adolescent child-bearers are usually economically unable to establish separate family units. Such adolescents and their children, continue to be, or become the financial responsibilities of their own families. As a result the economic bases of such families are weakened and their standard of living is reduced as they assume the additional child-rearing responsibilities.

New and scientific perspectives focused on the phenomenon of adolescent child-bearing in Jamaica, could alleviate the impact of the related problems. A pro-active and systematic approach has the potential for controlling the problems and directly affecting certain sub-groups in the population. With higher education and greater labour force

participation women are better able to control their fertility behaviours. Direct results of such control include more effective spacing of conceptions and births and reduction in total family sizes. Such population control ultimately reduces the medical and social risks associated with adolescent child-bearing. The advantages of reduced risks are shared by the adolescents concerned, their children, their families and ultimately, the entire society.

3. Goal-setting. Goal-setting is an important step in developing a system for change (Lippit, 1973). The goals of the system spell out that system's purpose. These goals establish the priorities of the system and help to identify the actions to be taken and the resources which are necessary to achieve the system's purpose. Havelock and Huberman (1978) regard goals as the organizing principle or ideology of the system. Clearly defined and understood goals secure commitment to the system's task as well as provide the focus for that system's energies. Havelock and Huberman also regard realistic and honest goal statements as the summation of the system's outputs. However, they caution that goal statements often exaggerate the actual outputs of the system.

Both the long-term and short-term goals of the change system must be consistent with the goals and limitations of the supra system. The change agent's perceptions of people vis-a-vis his or her perceptions of the status quo will influence the goal-setting mode. The goals for the MRPA were established upon several bases. The researcher's perceptions of people provided the initial basis. People are perceived to be continually aspiring to achieve a higher level on a psycho-emotional hierarchy of need fulfillment. Consequently, they are also seen as usually

desiring changes to improve their life styles. A second basis which guided the development of goals in this model was the researcher's conceptualization of the status quo in a dynamic society. The contradiction between these states is indicative of a need for change. Finally, goals were developed based upon the researcher's perception of the individual's needs within the framework of the total society. This last understanding is essential in setting realistic goals and is made possible when the change agent is in possession of adequate information about the separate parts of the macro- and micro-systems.

4. Resource identification. The lack of adequate resources has been cited as a major cause of failure to implement change. This condition is especially relevant in developing countries (Havelock and Huberman, 1978). Frequently change strategies fail to bring about the desired effect because of breakdown in the implementation phase. Land (1976) cited by Nkungula (1980) remarked upon the failure to implement training programmes in developing countries due to lack of facilities, funds and effective leadership. Ruscoe (1969) referred specifically to the negative impact on programme development and improvement due to inadequate resources for research.

The change agent needs to be knowledgeable regarding the resource needs and resource availability relative to the change process. Accurate resources accounting enables the change agent to set more realistic goals. The reverse is also true and could lead to under- or over-utilization of the available resources or to costly duplication of services.

Smooth implementation of the MRPA requires that all available resources be brought into the process. Initially, the change agent's

speical skills, particularly the conceptual skills are valuable to the change process. In the given situation, it is also expeditious to identify and use resources of the community beyond the school. Opportunities for the community to participate in the implementation of the model could ensure greater support for the innovation.

5. Implementation. Even a well-designed change model can fail to achieve the desired impact due to complications in the implementation stage. In referring to the implementation of an educational system, Healy (1973) commented that both external and internal factors could retard the implementation stage. Societal pressures and lack of incentives are two factors which must be recognized and anticipated.

Hersey and Blanchard (1977) refer to the driving and restraining forces which could expedite or impede the implementation of change. The change agent and/or the co-ordinator of the change system needs to be aware of both types of forces and to plan for them in the overall system design. Timing of the implementation is more auspicious when the drive forces predominate. Awareness of the proper timing is even more critical when change is being planned from outside of the organization that will be affected by the change. In such a situation it is critical that the designer be thoroughly knowledgeable of the organizational structure.

The implementation of the MRPA has been planned to take place in secondary schools. The model requires open communication with and between units in the school, between the school and the community, and between the school and the implementer of the change model. Open communication is essential to ensure complete understanding of the

goals of the model, to build commitment to achievement of those goals, to ensure broad bases of participation in solving the problem, and in building support where there may be pockets of resistance.

Control. The final step in the design of a dynamic model is the creation of a device for controlling, revising and testing the model. In order to do so, it is necessary that criteria be established for measuring the effectiveness of the model, as part of the total design for effecting change. Criteria may be stated in quantitative or qualitative terms (Lipppit, 1973). Clear statements of goals and objectives of the model may also be regarded as the first control mechanism in the model.

Project evaluation is a necessary function in the total design for change. Where this function is linked with planned feedback mechanisms, evaluation has the multiple advantages of being a progress report, providing information for current improvements and of providing advance information for subsequent steps in the project. Havelock and Huberman (1978) have found that evaluation of educational projects is usually weak in developing countries. For that reason, assessment of the effectiveness of such projects is usually questionable.

Wilson (1978) recognizes the need for programme evaluation but he contends that current evaluation of educational programmes is excessive and counter-productive. Jekel (1975) also has remarked upon the need for evaluation of programmes which deliver services to adolescent childbearers. However, he also observed the negative effects that insistence on evaluation can have on co-ordinators of such services. Insistence on scientific evaluation must be consistent with the available research

skills of service providers and co-ordinators. Less rigorous programme appraisals can provide useful and acceptable information. It is important, however, that some type of systematic control, measurement, and reporting takes place during the implementation of the innovation.

Components

The components of the model refer to the distinct units which respond to the educational, personal development, emotional, health or other needs of the pregnant adolescent, school-age parent and other adolescents susceptible to too-early pregnancies.

The components are pro-active and reactive. The pro-active component emphasizes the preventive aspects of treating the problem. These components which are long-term and continuous are directed at delaying pregnancy among adolescents susceptible to pregnancy or at avoidance of repeat pregnancies for others. Curriculum changes and institutional re-organization are advocated to educate adolescents away from too-early pregnancies.

The reactive components of the model seek to address the existing problem. They emphasize adjustment and rehabilitative strategies for the pregnant adolescent or the adolescent parent.

Implementation of either the pro-active or reactive service necessitates collaborative efforts between the adolescent, the school, the home and the larger community. Because delivery of services through the conventional school necessitates certain structural and attitudinal changes, it is necessary to build awareness to the problem and support for the delivery mode. It is critical that the school community be

sensitized to the need for keeping pregnant students or student parents in the system. It is also important that they and other support personnel understand the goals of the model and be committed to them.

Theoretical Framework

Conceptualizing the Model

Change is a characteristic of a dynamic society. Hersey and Blanchard (1977) observe that the effective change agent must be able fo function at a level beyond diagnosis of the problem. The change agent who will effectively manage change must be able to develop strategies for, direct, and control change. However, Hersey and Blanchard question the effectiveness of some change strategies.

Wells (1976) has commented upon the perceived urgency for changes in, and by developing countries. He also recognizes the importance of the educational systems in the change process in these countries. However, he commented upon their diminished ability to expedite change because of their inadequate information-gathering and information-management systems. Wells also implies that educational and national changes are retarded due to failure of developing countries to systematize the change processes. Systematization of the change processes would produce a developed and defined perspective on the problem: its cause(s), definition of the preferred situation, alternatives for achieving the preferred situation, and criteria for measuring achievement.

A process or developmental model (Lippit, 1973) permits conceptualization of the problem situation by the change agent. The agent's ability to conceptualize the situation is affected by his or her

perceptions of the status quo and his or her philosophies and assumptions about the beneficiaries of the change model in developing countries. The systematic and systemic nature of the change model requires distinct and sequentially developed phases. The model assumes openness to and of the supra-system. Systemic openness creates a responsive relationship between the model and the object of the change process. Responsiveness of the model is made possible by planned opportunities for feedback and evaluation. The feedback component of the model allows for revision and adaptation consistent with the changing environment.

Thompson (1976) suggests that an essential characteristic of a model is its ability to provide a systemic framework for studying the problem. The model also describes the structure and the interrelationships of other parts of the system. The model is logically "complete" with specific boundaries within which the intent of the model is spelled out. Completion is relative but the term implies a set of inter-related events towards a pre-designated culimnation. Merkle (1979) suggests the following guidelines for the development of a change model. It must (a) have a statement of intent, (b) subsume specific principles, (c) make specific assumptions, (d) have specific tasks, and (e) show its developmental stages. Lippit (1973) also identifies the following as characteristics of a change model: (a) the model has definite limits, (b) it allows dialogue, and (c) serves as a guide for directing change.

Whereas Wilson (1978; p. 196) identifies eight steps in his systems analysis cycle, these stages may be collapsed into O'Neil's (1979) five-stage model for instructional systems development. These stages correspond to the six stages which have been discussed in the Model for

Retaining Pregnant Adolescents and School-Age Parents in the Jamaican Secondary Schools. A dynamic system allows a free flow of ideas in its attempt at completing its specific tasks. This process is recognized by Havelock and Huberman (1978) as 'through-putting.' During this process, the system's in-puts are being transformed into out-puts. The way in which the through-put process is conducted determines the effectiveness of the system and ultimately, the effectiveness of the change process.

The MRPA is a dynamic system. It is in an inter-systems relationship with other systems including the school and the community. The in-puts of the model are identifiable at each stage of its development. These in-puts include (a) broad-based and comparative data, (b) philosophical and theoretical frameworks for conceptualizing the problem, (c) specific goals, (d) suggestions for remediation and change, (e) allowance for participation at various levels in the implementation strategies, and (f) tools for measuring and controlling the change process. The out-puts of the model would include measurable ways of depressing various aspects of the problem. Measurement of the out-puts must be considered within a time frame commensurable to the time it takes to produce visible and measureable changes of the nature being created.

Principles and Assumptions

Principles. The model is a conceptual tool based upon principles which have been subsumed therein (Rossing and Kuhn, 1977). The perceptions and the philosophies of the change agent are important factors in the design of a model. The agent's personal philosophies modify his or her perceptions of the real situation. Eventually, the tool for

effecting change--the model--is a function and an articulation of his or her personal philosophies and his or her perceptual screen regarding the individual and the society within which he or she operates.

Six principles are subsumed in the MRPA. These principles are:

1. Positive regard for the individual. Individuals deserve the respect of their fellow people. Respect is partly demonstrated by the society's assistance to members of the community in helping them to achieve personal development, self-fulfillment and self-respect. Change is in the interest of individuals and rejects manipulative tactics in the process.

2. Involvement. The effective change agent must be willing to become involved beyond passive awareness of the need for change. He or she must be prepared to become involved both with the clients and the system, in various roles, simultaneously or separately. His or her roles may include interpreting, mediating, negotiating. The change agent's level of involvement is partly determined by his or her capability to assume a pro-active or purely reactive stance in the change process.

3. Risk. The change agent must be sensitive to the vested interests of groups in the status quo. He or she must learn to work with all these groups but must be sensitive to the risks involved as these groups interact at various stages of change implementation. The change agent's openness and flexibility also allows experimentation: he or she must risk in search of the most appropriate alternative in the problem-solving situation.

4. Accountability. The change agent is accountable on two levels.

Initially, he or she must be aware of his or her motives for effecting the proposed change(s). The desired results must also be consistent with the interest of the target of change (Lippit, 1973). On the other level, the change agent is responsible to those affected by the change.

5. Collaboration. The attempt to effect change is a collaborative effort between several parts of the total system: the school, the community and the nation. Collaboration is essential to prevent alienation of any part of the total system and to utilize all available resources, effectively.

6. Task-orientation. The purpose of the change process is to improve a given situation. It is imperative, therefore, that measurable change results after implementation of the strategy for change. Clearly defined tasks at the outset focus the direction of change.

Assumptions. The assumptions upon which the change strategy is designed form a part of the change agent's frame of reference. The essential assumptions of the MRPA relate both to the change process itself and to the change targets.

1. Individuals are usually willing to accept change if that change is likely to improve their situation.

2. Individuals, given the appropriate coping skills, can learn to cope, and will eventually adapt to a new situation, providing that situation is consistent with their personal self-image and desire for goal attainment.

3. Effective implementation of planned change strategies to improve the situation of the target group, is possible.

4. Most of the individuals who are the target of the planned

change would desire a change in their situations.

Education and the Society

Education and National Development

Havelock and Huberman (1978) have written extensively on the role of education as it affects national development in developing countries. They have recognized the urgency for innovation as a part of the political process in these countries. However, they have cited certain paradoxes in the demand for change. Whereas the demand is great, the resources to facilitate change are often inadequate. Nonetheless, educational innovations proceed at a rate, often equal to, or faster than in some developed countries. Frequently, such innovations fail to maintain their momentum and fail to produce the desired effect partly due to the lack of primary resources and partly due to the structure and function of the educational systems. Despite the "large-scale investments and expectations, few of these innovations appear to make a dent at the national level in the educational system or problem which they were designed to solve" (p. 15). The effect of structural lag is compounded by the over-centralized systems which separate the change agents from those affected by the problem and subsequent change, in the decision-making process.

Nonetheless, the educational system is expected to expedite national development, moreso than any other developmental system in these countries. Case and Niefhoff (1976) have identified human resource development as a major task of the educational system in developing countries.

They have also recognized the important role of education in redefining national "development" while it is, itself, a part of the process. Redefinition has become expedient in the rejection of the gross national product (GNP) as an adequate indicator of development, and amid the tide of rising expectations in developing countries. The GNP measure has been rejected because the expected "distributive justice" or "trickle-down theory" has not had the anticipated result of dispersed national accumulation of wealth. In view of this failure, and the population increases experienced in most developing countries, education is currently expected to be the corrective mechanism.

Education also has the important function of supplying the core of middle manpower needs in developing countries (Nkungula, 1980). Nkungula's concept (pp. 81-82) of middle manpower which extends beyond the traditional blue collar skilled and semi-skilled occupations is applicable here. That concept includes jobs in the "semi-professional, sub-professional and technical" levels as well as jobs at the professional levels. In developing this essential pool of trained manpower, education has been instrumental in expanding the old, and developing a new middle class in developing countries. This observation has been supported by Rowley (1971) who noted that education is an emerging factor in the emerging class structures of developing countries.

Educators, sociologists, economists and other scientists have recognized the contribution that education makes to national development. Schultz (1963) and Weisbrod (1964) cited by Harris (1970) both make strong arguments for national investments in education, in view of the potential for economic growth and the economic returns to society

from such investments. Rowley (1971) also has commented on the potential of education to bolster economic growth in developing countries. Case and Niehoff (1976), Harris (1970) and Harbison (1967) have also noted the function of education in personal development and fulfillment of the individual.

While the expectations of education in national development in developing countries is clear, the limitations upon the system are also noticeable. The scarcity of resources, political and other social pressures, unclear goals or goals incompatible with the stage of national development, the inflexibility of over-centralized systems and other structural deficiencies have been documented as reasons why educational systems have not performed up to expectations. Notwithstanding the limitations of educational systems, education is conceived as a necessary part of national development. It is also expected to transform the economic and social structures as much as it creates increases in productive growth, and simultaneously improving the quality of living for the individuals in the society.

Structure and Function of Education in Jamaica

Much of the discussion and the observations in this section and the next are based upon the researcher's professional experience in, and familiarity with the Jamaican system of education. In Jamaica, the educational system is the administrative responsibility of a ministry of government within the central administration. The Minister of Education is the chief executive in the ministry and is held responsible before the Cabinet of the country. Figure 4.3 represents the

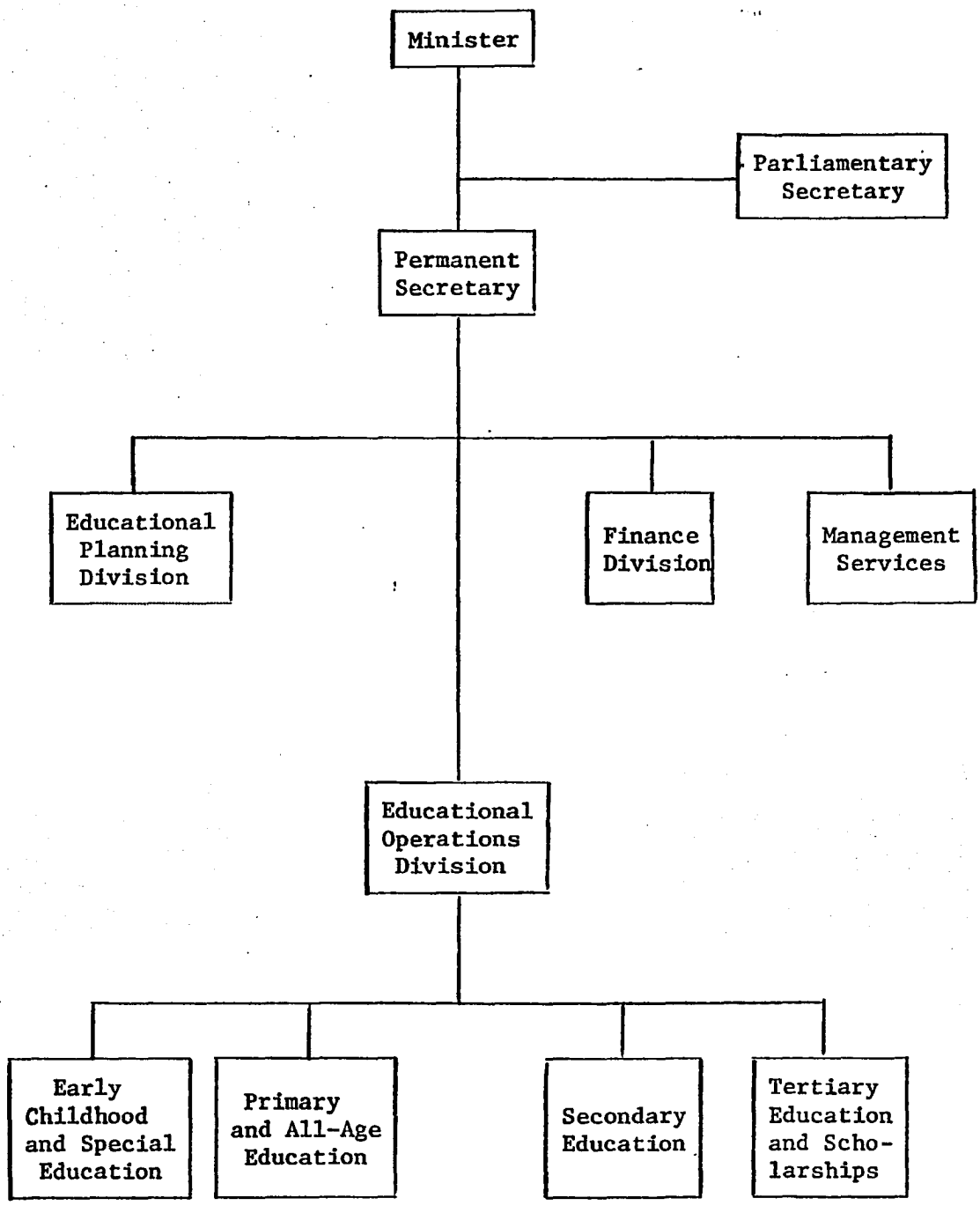


Figure 4.3

Organizational Chart of the Jamaica Ministry of Education

organizational structure of the ministry. The educational system is highly centralized with universal policies governing students, staff, resource allocation and other management functions of institutions falling under the jurisdiction of the Ministry of Education.

Education is essentially free or highly subsidized for all recipients from the primary through the tertiary level. Prosser (1975) observes that about 90 per cent of all children who are eligible for primary education, in fact do receive education at this level. He also observed that although 60 per cent of these students continue into the first cycle of secondary education, only 10 per cent advance into the second cycle. (Table 4.1 shows the various levels of the educational system.) Based upon information from Table 4.1 and her professional knowledge of the structure of the Jamaican educational system, the researcher estimates that 10 per cent reflects severe undercounting by Prosser. Having entered the secondary level, there is no further selective process that would eliminate students in the large numbers implied by Prosser. Although the incidence of drop-out from school exists and the rate of the problem is unknown, there is no formal structural condition that would account for the severe loss of students that Prosser has implied. In addition, more students have been accomodated with the additional school places which have been made available since Prosser's (1975) documentation. All education at the tertiary level, that is all post secondary education, is subsidized for all recipients to between 60 to 70 per cent of the actual cost.

The role of education is linked to the national ideology. Education has been recognized as the primary vehicle for effecting desirable

Table 4.1

Educational Levels, Grades by Ages, and Percentage of Students at Each Grade Level in the Jamaican Educational System

Age (in Years)	Percent of Total School Population	Level	Institution	Grade	Number of Years
3+ - 6	13.7	Pre-Primary	Basic Infant Preparatory	-	0 - 3
6 - 11	53.7	Primary	Preparatory Primary All-Age	1 - 6 1 - 6 1 - 6	6
12 - 16+	13.2	Secondary	All-Age Vocational New Secondary High Comprehensive	7 - 9 - 7 - 11 7-11 or 7-13 7 - 11	3 2 5 5 - 7 5
* 17+		Tertiary	Community College Cultural Training Centre Agricultural College Technological College Teacher's College University		1 - 3 1 - 3 2 - 3 1 - 3 2 + 1 3+

*End of Ministry of Education target groups.

Source: Adapted from 5 - Year Education Plan (1978-83), 1978; p. 16) Ministry of Education, Jamaica

social, political and economic changes. More specifically, education is expected to increase the economic outputs of the country while creating a more egalitarian society. Specific educational goals have been designed to respond to the developmental needs both of the individual and the community (Ministry of Education, Jamaica, 1978a; p. 6).

The educational system is expected to provide educational opportunities for each child between 6 1/2 to 16 1/2 years old. Additionally, the system aims at providing continuing educational opportunities for individuals who are above the stated age limit.

Despite the recent innovations within the system and its increased effectiveness, the current educational system is beset by severe limitations. For that reason, successful achievement of the social goals remains a challenge to the Jamaican educational system.

Secondary Education in Jamaica

Despite the recent attempts by the Ministry of Education to upgrade facilities in all schools, the demand for these facilities is still greater than the supply at this time (Ministry of Education, Jamaica, 1978a). At the primary level, the teacher:pupil ratio (1977) stands at 1:45 while at the secondary levels, there is one teacher for every thirty students. The teacher:pupil ratio is usually lower (1:25) in more vocationally-oriented programmes. The student population outstrips the school facilities so that by 1980-1981 there was a projected shortfall of nearly 85,000 school places in the primary and secondary grades (Ministry of Education, Jamaica, 1978a; p. 186, 187). However, this shortfall was reduced by an anticipated

11,000 secondary places, made possible by initiation of a double shift system in traditional high schools. More students have been accomodated as a result of this lateral expansion, but, there are still more students than can be accomodated.

To date, progress through the system from one level to the next is not automatic nor unidirectional. Education at the secondary and tertiary levels is highly competitive and operates on a very selective system. Three national examinations are used as the bases to select students into the secondary level while eliminating all but the highest achievers from the primary level. Not all students who fail to advance into the secondary level are low achievers. An institutionalized failure system is built into the selective examinations in order to limit the numbers until they are more in keeping with the physical capacity at the secondary and tertiary levels.

Graduation from secondary schools is no more automatic than entry into them. Jamaica is oriented towards academic examinations and certification, and to a marked degree, an individual's social status is linked to the number and levels of examinations at which he has been successful. Externally administered examinations mark the end of a student's secondary school career and he or she is required to obtain a minimum number (3-5) of academic subject passes to achieve certification, a prerequisite for graduation at this level. The General Certificate of Education (GCE) is the more common qualifying examination. It is administered by British universities and has international recognition particularly within the British Commonwealth countries. The more recent Caribbean Examination administered by the Caribbean

Examination Council is being phased in as of 1979 (Ministry of Education, Jamaica, 1978a). This is an assessment type examination emphasizing cumulative learning and development.

Certification assures the graduate of a competitive chance to successfully enter the tertiary level or the job market at the middle manpower level. The uncertified school leaver usually has minimal chances of proceeding to the third level. His or her entry into the job market is equally less auspicious. Powell (1978b) supports the observation that such a school leaver enters in the category of the unskilled labourer or fails to enter the job market at all,

Summary

Education has been recognized as an important element in national development. In the context of developing countries, education has a dual economic and social role. However, a performance gap exists in the educational systems of most developing countries, partly due to the inadequacy of obsolete structures which are incompatible with current national goals. The performance gap is also partly due to the inadequacy of the available resources and/or the social and political pressures upon the educational systems.

Developing countries are often faced with the task of establishing educational priorities consistent with the national goals and the limited resources. In situations where education is expected to resolve the practical problems facing emerging nation's, the countries' decision-makers face such questions as: Who should be educated? What is the national objective: an academic elite or a broad-base of technical

expertise? The answers to such questions determine how resources are allocated as well as the structural and attitudinal changes which may be necessary in the society.

In Jamaica, the social expectations of the educational system are specific. The system has accepted the challenge of these social goals. Despite the progress up until this time, greater effectiveness is required of the system. It is likely that increased effectiveness of the system will depend on its ability to create the structural changes which would make it more responsive.

Description of Selected Programmes

In order to develop the bases for the model proposed in this study, four programmes were studied in a survey of selected Michigan programmes. These programmes are located in three different cities which ranged in population from 79,000 to 1,314,000 people (Verway, 1980). The distribution of the programmes by categories is shown in Table 4.2.

Table 4.2

Distribution of Selected Programmes by Categories

	Mainstreamed	Alternative	Totals
Public School System Sponsored	1	1	2
Other-Agency Sponsored	0	2	2
Totals	1	3	4

For individual discussion, and to maintain the confidentiality of the programmes, they have been identified as Programme A, B, C and D

respectively. Programme A is located in a city of 79,000 people but offers its services to clients throughout the county. Programme B, in a city of 1,314,000 people, has been described as an inner-city programme by its co-ordinator but it also serves a tri-county area. Programmes C and D both are located in the same city which has a population of 105,000 people.

Information on the selected programmes was reported under the headings (a) development and structure, (b) clients, (c) services, (d) funding, (e) control, (f) community involvement and (g) impact of the programme on the problem of adolescent child-bearing.

Structure and Development

The discussion on structure and development elaborates on the history, goals (Table 4.3) mode of service delivery and the affiliation with the Board of Education of each programme.

Programmes A, B, C, D have been operating for 17, 8, 9, and 7 years, respectively. Creation of the programmes were on the initiative of the respective local school district or local volunteers. The general concerns of the programmes were similar. Provision of continued educational opportunities, maintenance of maternal and child health, and client-accessibility to adequate social and other supporting services were the major concerns addressed in the type of services provided by each programme.

The delivery mode and the affiliation of the individual programme with the State Board of Education varied. One programme (C) was mainstreamed, offering services in the conventional school setting. This

Table 4.3

Goals of Selected Programmes

Goals	Programmes Reporting Goals				
	A	B	C	D	Total
1. To minimize educational interruption for pregnant students and school-age parents.	x	x	x	x	4
2. To be an emotional support system for students.	x	x	x	x	4
3. To promote and maintain high standards of maternal and child health.	x	x	x	x	4
4. To assist school-age parents toward economic self-sufficiency.	x	-	x	x	3
5. To put students in touch with existing social agencies and other support services.	x	x	-	-	2
6. To prepare students to assume parenting responsibilities.	x	x	x	x	4
7. To reduce the number of repeat pregnancies among adolescent parents.	x	x	x	x	4
Total	7	6	6	6	25

programme was initiated by the local school district upon public request, and is still directly sponsored and accountable to the public school system. The other three programmes (A, B, and D) are alternative programmes but their affiliation to their school districts vary. Programme A was started by volunteers but has always been supported by the public school system and is presently a part of this system. Programmes B and D are both private programmes which are indirectly affiliated to the public school system. Programme D is a private non-profit corporation supplying parenting services to the school district. It is housed in the local alternative school but is not controlled by the school district. Programme B is also a private facility totally controlled by a private agency.

Clients

Statistical data. Each Michigan programme which was surveyed offers county-wide services, at least, with Programme B offering services to a tri-county area. The primary method of recruiting clients into the programmes is through referrals. Table 4.4 shows the referral sources most often used by the programmes.

Table 4.5 shows the number of students served by each programme over the last five years (1975-1980). (Where available, the annual client intake, by age categories, for the five-year period, has been included in Appendix F.) A seeming decline has been taking place in the number of clients served by Programmes A and B. A newspaper article (Kalamazoo Gazette, November 23, 1980) has linked the apparent decline with the observed population decline in Michigan. Programme B's

Table 4.4

Referral Sources Utilized by Programmes

Sources	Number of Programmes
School Counsellors or Teachers	4
Family Planning Clinics/ Hospitals	3
Private Physicisns	2
Self-Referrals	4
Peer Referrals	1
Social Service Agencies (e.g. D.S.S.)	4

Table 4.5

Number of Students Served by Programmes 1975-1980

Year	Programme			
	A	B	C*	D
1979-80	162	489	25	62
1978-79	150	510	19	77
1977-78	161	525	14	48
1976-77	214	540	19	30
1975-76	215	624	23	36
Total	902	2688	100	253
Average	180.4	537.5	20	50.6

*Programme C reports annual client statistics by number receiving diplomas rather than by actual intake or by number served over the academic year. The supporting statistics for upward adjustment were unavailable at time of the study.

revised system of differentiating pre-intake from actual services has resulted in more accurate client accounting. The programme co-ordinator of Programme B has suggested this development as the most probable explanation for the apparent decline in the number of clients served recently.

Eligibility. In each case, the programme is open to residents of the county in which it is located. Pregnant students, school-age parents and their partners, the expectant or putative fathers, are eligible to participate in the programmes. Clients enter the programmes after a first pregnancy has been verified (Programmes A, B, C), as the parent of a young child (Programmes B and D), while experiencing a repeat pregnancy (Programmes A and D).

Duration of stay. The guidelines for client-stay are established by individual programmes. Whereas Programme C serves clients until parturition, Programme A extends services to clients until they complete high school or until they are 21 years old. Clients may remain in Programme B until age 21 years or until clients request to be dropped from the case file. In Programme D, they are accommodated through the first year of their first job or until they are 19 years or older.

Clients may prefer to return to their home school after delivery. Overall, there is a large percentage (53%) of students who leave the programmes to return to the conventional school setting.

The ages of clients in all programmes range from 11 to 21 years. Clients are mostly from low socio-economic backgrounds, with a high rate of dependency on public assistance. There are more black students than students from any other racial group.

Table 4.6

Characteristics of Students in Selected Programmes

Programme	Percentage Returnees	Duration in Programme	Ages Served	Public Assistance Dependents (%)	Racial Composition (%)		
					Black	White	Other
A	21	Until high school completion or age 21 yrs.	11 to 21 yrs.	85	59	38	4
B	50	To age 21 yrs.	15 to 21 yrs.	85	92	7	1
C	Not applicable	Until delivery	11 to 18 yrs.	Information unavailable	60	40	-
D	90	Through first year of first job	14 to 19 yrs.	98	40	30	30

Table 4.6 summarizes the important student characteristics including the percentage returning to their home schools, racial and socio-economic backgrounds and duration of stay in each programme.

Services

Each programme offers services in line with achieving its major goals. These services may be categorized as pro-active or reactive. The pro-active services stress the need for applying a preventive approach to the treatment of the total problem of adolescent child-bearing and particularly to preventing pregnancy-related school drop-outs.

Table 4.7 shows the preventive measures adopted by the respective programmes.

Table 4.7

Preventive Measures Adopted by Selected Programmes

Measures	Adopted by Programme A	B	C	D
Sex Education	x	x	x	x
Family Life Education	x	x	x	-
Contraceptive Education	x	x	x	x
Dispensing of Contraceptive Devices	-	-	-	-
Parental Involvement	x	-	x	x
Community Sensitization	x	x	x	x

The major components of service of the programmes are educational, health, social work/counselling and support services which include day-care, a hot meal programme and a vocational emphasis (Table 4.8).

Table 4.8

Services Offered by Selected Michigan Programmes

Services	Programmes A	B	C	D
Educational Component:				
academic curriculum	x	x	x	x
Health Component:				
maternal care	x	-	x	x
child care and development	x	x	x	x
pre-delivery hospital orientation	x	-	x	-
Social Work/Counselling:				
social agency referral	x	x	x	x
parental/family involvement	x	x	x	x
community outreach	x	x	x	-
conjoint counselling	x	x	x	x
Support Services:				
parent-infant intervention	x	-	-	-
sponsored meal programme	x	x	x	x
day-care	x	x	x	x
Vocational:				
skills training/job placement	x	-	x	-
Total	12	8	11	8

Educational component. The educational component contains an academic curriculum which is similar to the basic curriculum of the conventional high school, or the equivalent of that curriculum. The academic curriculum of Programme B leads to the General Education and Development (GED) certificate. In this programme, the educational component is open to any person in a tri-county area who is 16 years or older and who has not finished high school. The academic curricula of the other three programmes lead to a high school diploma directly, or in collaboration with the clients' home schools.

The academic curriculum of each programme shows some modification over that of a regular high school. These modifications allow additional courses in response to the special needs of pregnant students or student parents. Some inputs into the programmes aim at preventing or delaying repeat pregnancies. Other modifications permit greater flexibility in class scheduling, individualization and credit transfers between schools.

Health component. Health is an important component in each programme. Services are designed to achieve the pre-set health goal. This goal is tied in with the national concern regarding the high number of adolescent births which jeopardize the health of both mother and child. Health services are initiated upon entry into each programme and continue through the pre-, peri- and post-natal stages. In the programmes offering day-care, special attention is also paid to child-care, health and development.

The services offered in the respective programmes range from pregnancy testing for the newcomers, through regular medical check-ups and

special appointments for expectant mothers, mothers and children. The special health unit in Programme A provides the routine health care, directly. This programme and the other three collaborate with the local Health Department and other local health agencies which provide more specific services, by arrangement.

Social work component. The major services offered in this component are social work and counselling. The social work services are especially important partly because of the high number of clients who are eligible for public assistance. Work in this aspect of the component entails much inter-agency collaboration to put clients in touch with resources in the community. Co-operating with community agencies is important, particularly to Programmes A, B and D, which have a higher percentage of public assistance dependents.

The outreach aspect of the social work component is closely linked with and sometimes overlaps the counselling services. Each programme emphasizes outreach as an aspect of preventive or curative treatment. Outreach is directed at families, partners, or expectant or putative fathers, related to the clients. Special attempts are made to involve the related males in activities for parenting preparation. The underlying philosophy of this type of outreach activity is that joint participation by partners fosters greater willingness to share parenting responsibilities. Following on that premise, outreach has the potential to reduce the high number of socially, physically and emotionally disadvantaged children of adolescent parents. This aspect of outreach has met with less success than is desired by programmes.

Various types of counselling are offered by each programme.

Individual counselling is aimed at personal development. Group counselling and other group sessions are used as reinforcement and instructive techniques. Conjoint counselling is also widely used. In these situations clients and significant others are counselled together. The object of this type of counselling is usually to help the parties concerned to adjust to the fact of the pregnancy and to improve the relationship among them.

Support services. In addition to the major components, the importance of other units of service is recognized. Day-care facilities, a hot meal programme and transportation services help to maintain all the other components. Day-care has been rated as most essential. According to programme co-ordinators, lack of day-eare facilities is a primary reason for school drop-out among school-age parents. For that reason, they strongly advocate that day-care facilities should be provided within a comprehensive programme. Similarly, a reliable, cheap and easily accessible mode of transportation is important in the attempt to retain school-age parents and pregnant students. The sponsored meal programme helps to counteract the usually unhealthy eating habits of adolescents while boosting the health status of the unborn child.

Vocational training and job placement are intervention strategies used by Programmes A and C. Both services aim at improving the economic self-sufficiency of clients. Programme A currently has arrangements with local merchants for job placements on a small scale.

Each programme utilizes a range of professional and sub-professional services, The staff:student ratio (1979) ranges from a low of 1:3 to a high of 1:12.5. The approximate cost per student, calculated over a

similar operating period (1979-1980) ranged from a low of $968.00 to a high of $2,160.00.

Funding

The programmes receive funding from various sources. These sources and the relative importance of each in the budgets of the respective programmes are reported in Table 4.9.

Control

Each programme is administered by a co-ordinator or director. Two of these administrators report directly to a governing board. One of the other administrators works with an advisory council but reports directly to the building principal. The fourth administrator reports directly to the superindent of schools. Each programme is evaluated annually. The primary evaluation tools used for their internal evaluations by Programmes C and D are yearly reports. The other two programmes are evaluated both internally and externally. Programme A is evaluated through financial and programme auditing by the major agencies which fund it.

Community Involvement

The success of the programmes depend partly on their relationship with their separate communities. They successfully collaborate with public and private agencies in the community, and, therefore, are better able to procure services for their clients. Community agencies are also important to several of these programmes for the direct monetary input they make (see Table 4.9) to these programmes.

Table 4.9

Relative Importance of Funding Sources to Respective Programmes

Programme	Funding Sources and Percentage Contributed								
	Local School District	Direct Gov't Disbursements			Social Service Agencies	Private Agencies	Personal Gifts/ Grants	Foundations	Total
		Local	State	Federal					
A	-	30	30	30	-	-	6	2	100
B	-	-	-	4	15	81			100
C	75	-	25	-	-	-	-	-	100
D	-	20	70	-	-	-	10	-	100

The participation of the respective programme in the life of the community and vice versa is also an important indicator of community involvement. Three of the four programmes conduct regular open education sessions on aspects of human sexuality in their respective communities. Also they each collaborate closely with other area schools.

On another level of involvement, each programme has maintained a strong outreach focus. Through this outreach, families, parents particularly, and significant males are brought into some kind of interaction with the programmes. Community input is also ensured at the management level. Each programme is set up with an advisory council constituted of community persons. In all cases, the programmes reportedly maintain high visibility in their respective communities.

Impact on Problem

The reported impact of the programmes on the problem of adolescent child-bearing is partly subjective and partly objective. Subjective reporting was given in the judgment of programme administrators while more objective reporting was done by examining the goal achievement in each programme. The major goals which were taken into account were numbers 1 and 7 (Table 4.3) which are most directly related to the problem.

Minimizing educational interruption. The programmes which were studied showed that they were able to minimize educational interruptions for pregnant adolescents and school-age parents. The flexibility of entry into and exit from the programmes makes it possible for clients to maintain educational continuity through pregnancy and after delivery.

It has been argued in the research literature that where this continuity is maintained, the adverse effects of adolescent child-bearing are reduced.

Repeat pregnancy prevention. The three programmes with available statistics reported repeat pregnancy rates of 10 to 15 per cent among clients. Programme B experienced a 15 per cent repeat pregnancy rate among clients compared with 25 per cent among drop-outs from the programme. The repeat pregnancy rates of the respective programmes calculated over a one and one half to two-year period, for the three programmes is lower than the repeat rate (85%) reported by Furstenberg (1976) over a similar time period.

Subjectively, impact may be judged also by the community support and recognition received by each programme. Recently, Programme A was adopted as the model programme for the state of Michigan. The referral sources (Table 4.4) were also used as indication of the confidence of various agencies in the respective programmes.

Summary

Four programmes were selected to be included in the study of Michigan programmes. These programmes represented the various categories of programmes in Michigan and each was accredited by the State Department of Education.

The unstandardized methods of accounting made complete comparison impossible on some indices, for example, the number of clients served annually. Also the vague and variable definition of who is a drop-out from the respective programme made it impossible to use programme drop-out

as an indicator of programme impact. Overall, the programmes offer a range of preventive and reactive services, are widely recognized by local and state agencies and, apparently, are having a positive impact on the broader problem of reducing the adverse effects of child-bearing, by retaining adolescent child-bearers in the school system.

Programme Nucleus

The Model for Retaining Pregnant Adolescents and School-age Parents in Jamaican Secondary Schools (MRPA) has been designed to counter the immediate problem of pregnancy-related school drop-out in Jamaica. The model is also designed to create positive changes in the status of the more comprehensive problem of adolescent child-bearing as it may be perceived in Jamaica.

The MRPA has been designed systematically within a theoretical framework subsuming sociological and philosophical considerations. Inputs into the design of the model include (a) findings from a survey of similar programmes in Michigan, (b) review of a Jamaican case study (Appendix C), (c) a review of the relevant literature in the United States and Jamaica and (d) the researcher's knowledge of the Jamaican society and her professional experience in its educational system.

The specific goals of the model (Table 4.10) are expressed on a three-level taxonomy. These levels are:

1. long-term goals
2. short-term goals
3. objectives

Table 4.10

Goals and Objectives of the Model to Retain Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools

Goals		Objectives
Long-term	Short-term	
1. To reduce the ultimate threat to the stability of the Jamaican society, as that threat is perceived to be related to adolescent child-bearing.	1.1 To reduce the number of pregnancies and births among students in secondary schools.	1.11 To provide scientific and frank information on human sexuality to secondary school students.
		1.12 To assist students to develop responsible attitudes towards sexual relationships.
	1.2 To improve the chances for pregnant secondary students and school-age parents to graduate from school.	1.21 To sensitize the school community to the needs of pregnant students and school-age parents.
		1.22 To provide a flexible curriculum in response to the special educational, physical and physiological needs of clients of the services offered.

(continued)

Goals		
Long-term	Short-term	Objectives
		1.23 To provide supporting services to help retain pregnant students and school-age parents in school.
	1.3 To assist child-bearers in secondary schools to become employable.	1.31 To retain adolescent child-bearers in school, with minimum interruptions in their education.
		1.32 To provide opportunities for special on-the-job training for adolescent child-bearers, where possible.
		1.33 To provide opportunities for students to learn to make appropriate career choices.
2. To improve the status of women in the Jamaican society.	2.1 To assist female students to develop positive images of themselves.	2.11 To teach the value of self-identity and self-respect.

(continued)

Goals		
Long-term	Short-term	Objectives
		2.12 To provide female students with personal counselling, particularly those who are, or have been pregnant.
		2.13 To teach the importance and variety of the female role and function in the Jamaican society.
		2.14 To provide opportunities for students to identify with females in outstanding roles in the society.
	2.2 To assist female students towards becoming economically self-sufficient.	Same as objective 1.23 and objective 1.31.
3. To improve the chances for children of school-age parents to experience a more favourable life-style.	3.1 To improve the chances for good maternal and infant health among school-age parents and their children.	3.11 To teach the fundamentals of good health and nutritional habits to pregnant students and students who are parents.

(continued)

Goals		
Long-term	Short-term	Objectives
		3.12 To provide students with a balanced meal on a regular basis.
	3.2 To help create a more secure home environment for children born to school-age parents.	3.21 To mediate between pregnant adolescents and their families, where necessary.
		3.22 To teach responsible parenting to school-age parents and pregnant adolescents.
		3.23 To emphasize the characteristics and value of responsible behaviours in sexual and other interpersonal relationships.
	3.3 To increase community awareness of the problems which usually attend children of adolescent parents.	1.31 To collaborate with community agencies concerned with child development and welfare.

(continued)

Goals		
Long-term	Short-term	Objectives
		3.32 To create opportunities for public education regarding issues concerned with adolescent pregnancies.
		3.33 To create opportunities to allow public participation in finding solutions to the problems facing adolescent parents and their children.

The programmes which were included in the survey all identified the educational, health, social work and counselling as the most important components in a comprehensive approach to resolving the problems attendant upon adolescent child-bearing. Accordingly, the goals of individual programmes (see Table 4.3) reflect their concern to respond to the special needs of school-age child-bearers.

The goals of the MRPA also attempt to respond to the immediate needs of students who may be forced to drop out of school due to pregnancy and related problems. Goals of the proposed model are based upon a study of four Michigan programmes (Table 4.3). The first point of departure in the two sets of goals occurs in the MRPA's de-emphasis of the goal relating to the provision of social services. This is recognizably an important goal, however, the de-emphasis is consistent with the Jamaican context in which comparatively less public assistance is available.

The other point of departure occurs in the MRPA's emphasis on goals relating to upgrading the status of Jamaican women. Support for this goal has been found in the search of Jamaican literature, the review of the Jamaican case study and the researcher's observations based upon her voluntary work experience among women. Evidence from the literature search has associated adolescent and other uncontrolled child-bearing with wide-spread misconceptions about the role of women in the Jamaican society. The social regard for Jamaican women is often associated with their demonstrated child-bearing capacity. The model recognizes the need to create a different frame of reference for the establishment of self-identity among Jamaican young women. Consequently, certain goals

of the MRPA have been identified accordingly.

Components and Services

Pro-active component. The pro-active component is applicable to all secondary school students who are susceptible to pregnancy. Superficially, this component is only incidental to the model. However, its inclusion as a part of the model is defended of the strength of two different arguments. The first argument is based on the applicability of the services in the pro-active component to all students who may either be pregnant, non-pregnated or parents. Secondly, it is being argued that the preventive services and curriculum modifications which have been recommended are desirable in a comprehensive programme, as exemplified in the selected Michigan programmes, to address the complex problems associated with adolescent child-bearing. In addressing the problem of pregnancy-related school drop-out, the model has already recognized it as a part of that more complex whole. In conclusion, the researcher recognizes that technically the pro-active component is not directly a part of the MRPA, however, she does include it for consideration by those school administrators who may implement the model.

The units in this component relate to the educational goals of the model. This component proposes modifications to the secondary school curriculum to make it more flexible and responsive to the perceived needs of students for more scientific education in human sexuality. Upon modification, the following additions are recommended for inclusion in the secondary school curriculum:

1. sex education

2. family life education

3. contraceptive education

4. contraceptive referral service

The pro-active component also recommends the use of the Needs Assessment Inventory. This instrument may be used in the development and validation of the proposed units in this component.

The major support for the inclusion of these additions to the curriculum comes from two sources. The review of the relevant literature and the study of selected Michigan programmes both stress the need for the services. Each programme has included them as part of their academic curriculum (Table 4.7), in response to the perceived needs of their clients.

The following discussions in this sub-section pertain to the specific educational units in the pro-active component.

Sex education. A recent survey of Michigan administrators of programmes for high school child-bearers revealed that a need exists among persons of school-age for more information about human sexuality. The deficiency of adequate, scientific knowledge among United States adolescents was cited by Gebhard (1977), Reichelt and Werely (1975) and Osofsky (1970). Canon (1979) also cited a similar situation in Jamaica where the need was articulated by adolescent females.

Libby (1970) and Schulz and Williams (1968) have recommended the school as the most appropriate agency in the United States for disseminating sex and family life education. No evidence can be abstracted from the Michigan study, on this issue. However, the researcher supports the view that the school may be the most appropriate agency to offer

sex education in the Jamaican context. This opinion is given against a background of overt sexual restrictiveness. Open, frank sex-related discussions are socially discouraged in a society where evidence exists that adolescents are becoming more sexually aware at earlier ages (Powell, 1978a). Popular channels of information are usually misleading both in Jamaica and the United States. Gebhard (1977) and Reichelt and Werely (1975) suggest that the school may be the agency best able to correct the misinformation and balance the effect of the media.

However, Collins (1971) cautions that the sex education curriculum must originate from a philosophical, biological and sociological framework which is integrated into the rest of the curriculum. Episodic attempts to educate students would be unlikely to have the desired impact. Rather, where the attempts are isolated and unco-ordinated with the rest of the curriculum, both students and teachers stand to lose more than they could gain.

Family life education. The recent survey of four Michigan programmes for adolescent child-bearers has indicated that family life education is an essential component of such programmes. Other studies in the United States (Morse, Johnson and Johnson, 1979) have also supported the need for more comprehensive family life education. Expansion of preventive education beyond the biological and physiological understandings of human sexuality, to incorporate understandings of roles and responsibilities within sexual relationships. Where the appropriate staff is available and sufficient time can be allocated, the more comprehensive programme is recommended.

The proposal in the MRPA is for graded education in human sexuality

to begin in the seventh (or equivalent) grade. The seventh grade seems to be an appropriate place to start family life education in Jamaica for two reasons. The first of these relates to the effect of peer pressure. Peer pressure has been identified as a significant factor leading to initial sexual activity (Sorenson, 1973).

Powell (1977) found that sexual activity increased with age. It is to be assumed therefore, that the pressure to become sexually active will be least among seventh grade students, most of whom would be younger than the Sorenson sample (13 - 19 years). Where peer pressure to become sexually active is relatively weak, it may be assumed that students will be receptive to and capable of processing sound information on human sexuality.

The second reason relates to time allocation per subject area in the curricula of Jamaican secondary schools. Usually, the academic curricula in the junior grades are more flexible than is the case in senior grades. The greater flexibility at this level would also decrease the conflict in time allocation per subject area. Consequently, scheduling of substantive programmes in human sexuality could take place more easily in the junior grades.

Contraceptive education. Zelnik and Kantner (1978a) have found that there is an increasing number of adolescents in the United States, who are participating in unprotected sexual activities. While contraceptive knowledge does not guarantee contraceptive practice, adolescent parents have indicated that their ignorance of proper techniques contributed to first pregnancy events (Zelnik and Kantner, 1978b) In Jamaica, Roberts and Sinclair (1978) commented upon the negative effect

that the lack of knowledge among women between 15 to 24 years old regarding the menstrual cycle and reproduction has upon effective contraceptive practice.

The recent study of selected Michigan programmes has shown that contraceptive education is an important educational unit in preventive programmes. This importance was demonstrated by its inclusion in the preventive aspects of the programmes surveyed (See Table 4.7). The Alan Guttmacher Institute (AGI) (1976) has also adovocated that contraceptive education should be available at the junior high school level.

Traditionally, schools have failed to include sex and contraceptive education in their curricula because of perceived public sentiments. One argument against inclusion of those subjects has been that contraceptive knowledge would lead to sexual permissiveness among adolescents. This argument has been refuted by the observations of the administrators of the selected Michigan programmes. Refutation has also come through recent observations in Jamaica and findings in the United States. Shah, Zelnik and Kantner (1975) reported a study in which 80 per cent of the adolescents surveyed were sexually active without utilizing contraceptive devices. The increasing number of unintended pregnancies and abortions among adolescents both in Jamaica and the United States also indicates the prevalence of unprotected sexual activity.

Contrary to the fallacious argument that knowledge of contraception leads to permissiveness, this knowledge is important in preparing adolescents for responsible sexual behaviors. Informed adolescents are likely to be better prepared to behave responsibly in their sexual

relationships prior to their initial sexual activities.

Contraceptive referral service. The inclusion of the contraceptive referral unit was based upon the strong support for it in the survey of selected programmes. Also, the perceived need for such services strongly suggested the inclusion of the unit.

To date, United States legislations (at the state level) prohibit dispensing of contraceptive devices in schools. Neither the literature search nor the recent survey has indicated practices which contravene such legislations. However, both supporting sources indicate that adolescents have demonstrated the need for contraceptive services.

Ideally, the model would recommend that contraceptive devices should be made available to students by the school. The ideal recomemdation is made due to the strong and pervasive societal attitude against adolescent pre-marital sexual relationships. In Jamaica, family planning clinics have reported a high drop-out rate among adolescent users of contraceptives. Reports also indicate that adolescent drop-out is due partly to the judgemental attitudes of service providers towards adolescents desiring to procure contraceptive devices. In light of that observation, it is being hypothesized that more students would "contracept" if contraceptive devices were available to them within the privacy of the school.

Realistically, the model proposes the development of an effective contraceptive referral service. Development and organization of this service could be managed by the school nurse, the school health team or the guidance counsellor. Specific tasks to be accomplished by the referral system would include (a) creation of a pool of current

information on available local family planning services; (b) making local family planning agencies aware of the objectives of the referral system; (c) making family planning information available to self-selected students; (d) assisting self-selected students to use the available family planning services; (e) providing objective counselling to students who are in the process of deciding whether or not to "contracept." N.B. The details of self-selection may be more appropriately decided upon among the individual school management, the student and the parents, in the absence of binding legislation.

To this point in the development of the model, four ways have been proposed to aid in preventing additional school-age pregnancies. In recapitulation, the model is proposing both pro-active and reactive measures to decrease the number of pregnancy-related drop-outs from secondary schools. The four educational units and the curriculum modifications compose the pro-active component. The reactive components will be discussed in a later sub-section.

The preventive aspect of the model has been emphasized repeatedly. The reason for this emphasis is due partly to the recognition of its importance by surveyed programme administrators. The literature review has also emphasized the preventive aspects of services to adolescent child-bearers. Finally, the effectiveness of the MRPA partly depends on preventing rather than coping with the problem of adolescent child-bearing and subsequent school drop-out.

Needs Assessment Inventory for Teenage Pregnancy Prevention

Some secondary schools in Jamaica currently provide sex or family life education in the regular curriculum; other schools do not. Those schools which do not presently offer education in human sexuality, may consider developing new programmes or nodifying existing ones to remove the deficit. The following instrument may be used as an aid in the development of systematic, integrated sex or family life education programmes.

The Needs Assessment Inventory for Teenage Pregnancy Prevention (NAITPP) which was developed by the University of West Florida has been included in the model (pp. 118-121) to assist in developing such programmes. The instrument may also be used to assess parental or other community group approval of the educational objectives of the programme and to structure inservice training for the special staff.

The NAITPP was validated by testing it for content relevance and its reliability content. Content relevance was tested in reference to an extensive search of the literature on teenage pregnancy in the United States. Inclusion of each item was on the basis of its support by at least three authoritative and scholarly sources. The content relevance was also assessed through interviews with a group of adolescent women who were either (a) pregnant (b) sexually active and seeking information from a family planning agency or, (c) non-sexually active women seeking sex-related information from a family planning agency.

Reliability. The NAITPP was also validated with respect to its

reliability (Morse, Johnson and Johnson, 1979). The reliability was assessed using the formula for the Coefficient Alpha. Reliability scores were obtained by surveying three different groups working on problems of pregnant adolescents. The group reliability scores ranged from 0.951 to 0.984, producing an overall reliability score of 0.977.

Minor modifications to the instrument were necessary to ensure its appropriateness for use in Jamaican schools. These modifications appear in the information request and directions section of the instrument and in no way affect the validity of the items themselves. Both the modified (p. 117) and the original (pp. 118-121) information requests have been included. Users of the instrument in the Jamaican school system would use the modified information requests.

MODIFIED REQUEST FOR INFORMATION

Please supply the information requested velow:

Age:_____ Sex: (check one) ( ) Male ( ) Female

Marital Status: (check one) ( ) Single ( ) Married
( ) Separated ( ) Divorced

Education Completed: (circle highest grade/level completed)

a. Primary/Secondary School 1 2 3 4 5 6 7 8 9 10 11 12 13

b. College (Teachers' College, CAST, JSA) 1 2 3 4

c. University 1 2 3 4 5

Family connections:

How many brothers and/or sisters do you have? _____

How many children do you have in each category?
(Please place a check (✓) in the appropriate blank space.)

1-5_____ 6-10_____ 11-15_____ 16-20_____ 20+ years_____

If no children, check here_____

Residence:
In which type of community do you live? (check one)
( ) Rural ( ) Small town ( ) Large town ( ) Suburb
( ) City

Religious affiliation: (check one)
( ) Catholic ( ) Protestant_____ ( ) Jewish ( ) Rastafarian
( ) Other: _____ ( ) None

Directions: Below is a series of skills related to prevention of pregnancy for adolescents between twelve and fifteen years of age. These skills could be taught in an educational programme.

Please indicate your level of approval for including each skill in an educational programme for adolescents between twelve and eighteen years of age, by circling the appropriate number to the right of each item. Please be sure to complete each item.

1 = Strong disapproval
2 = Moderate disapproval
3 = Slight disapproval
4 = Neutral, neither approval or disapproval
5 = Slight approval
6 = Moderate approval
7 = Strong approval

Reactive components. The reactive components in the model are comprised of those services which are expected to respond to adolescent pregnancies which are fait accompli. Five components have been proposed. These are:

1. educational
2. health
3. welfare
4. vocational
5. support services

Together, these components represent a comprehensive approach to the treatment of the problem of adolescent child-bearing. The comprehensive approach has been advocated by the findings from the recent survey of selected Michigan programmes and by the research of the literature on service delivery to adolescent child-bearers. The comprehensive approach is intended to respond to the specific educational, physical, physiological and emotional needs of these adolescents.

Table 4.8 shows the range of services provided by the selected Michigan programmes in response to the special adolescent needs. Based upon that survey, and reference to the various knowledge sources available to her, the researcher proposes the following services:

1. modified academic curriculum	educational component
2. pregnancy testing	health component
3. pregnancy counselling	
4. health referrals	
5. counselling	

6.	home visiting	welfare component
7.	interagency liason	
8.	outreach	
9.	job training and/or job placement	vocational component
10.	career counselling	
11.	day-care facilities	support services component
12.	school-meal programme	
13.	interim follow-up	

Educational component. The educational component of the MRPA consists of a standard academic curriculum with modifications. The educational component has been emphasized by the recent survey of selected Michigan programmes. All four programmes advocate and provide an academic curriculum (Table 4.8). Support for this component also comes from the literature review and the Jamaican case study review.

Like their peers, pregnant students and student parents need to be educated. It may be argued also that most adolescent childbearers have a more urgent need to be educated than their peers who are neither pregnant nor parents.

Given the Jamaican social conditions, the young parent, especially, needs the insurance of a secondary education. The findings from the Jamaican case study (Appendix C) revealed that 95 per cent of all clients intended to keep their babies. Thirty-five per cent of these clients were receiving no support from the alleged father and 63 per cent lived in situations where the household head was either

semi-skilled, unskilled or unemployed. Secondary education could improve the young parents' competitive chances for employment. It follows that with greater opportunities for economic self-support school-age parents could help to diffuse the social problems attendant on adolescent child-bearing.

Educational attainment could diffuse the social problems in a second way. In Jamaica, Roberts and Sinclair (1978) and McKenzie, cited by Canon (1979), have established an inverse relationship between educational attainment and large family size. A similar relationship has been established by Furstenberg (1976) in the United States. These studies have shown that female school drop-outs are likely to have larger families than their peers who have delayed pregnancy and who have graduated from secondary school. This finding is especially relevant where school drop-out was pregnancy-related.

The educational component is necessary to achieve the stated goals of the model. Minimizing educational interruptions for pregnant students or student parents is best assured by retaining these students in their regular school environment. In this setting, students have the opportunity to benefit from the usual curricular and extra-curricular secondary school programme while being assured of the desired educational continuity.

Curriculum modifications. The MRPA proposes that the regular secondary school curriculum be modified to permit additional or substitute courses. Such courses would be in direct response to the need of pregnant students or student parents for coping skills. Specific units are recommended to teach parenting skills, child-care,

and nutrition for the pregnant person. These recommendations are based primarily on discussions of the academic components of the selected Michigan programmes between the researcher and the respective administrators. The inclusion of short practical courses in defensive consumerism, budgetting and money management is also recommended. The inclusion of such courses could be of specific value to students who establish their own household units.

It is also being recommended that where possible, the proposed courses be developed in conjunction with existing subject areas. Parenting education, for example, could be presented through the existing Health Science, Child Care or Biology syllabuses. Similarly, the Home Economics syllabus could be modified to incorporate several of the recommended courses.

Sex, family life and contraceptive education have been recommended for all students. It is, therefore, assumed that these subjects would be presented as units may be reinforced by special treatment for the benefit of clients in the special programme. It is recognized that the specific arrangements for integrating the proposed courses may be handled best by individual schools. However, the importance of including these units is being impressed upon all.

Health component. Each of the selected Michigan programmes included a health component. This component included services such as maternal care, pre-delivery hospital orientation and more specific units of service within the named categories. The actual services varied with the programme (Table 4.8), but there was a universal focus on improving and maintaining the health status of clients. The

health component is also essential in achieving the heal-related goals of the model. This component is also important in as much as the health goals impinge on the achievement of the long-term goals of the MRPA.

The health component has been structured taking into account the factors which are likely to have a negative effect on the availability of health care in Jamaica. Negative factors which were considered included the perceived lack of medical personnel and facilities, the unavailability of economic resources and the proximity of health care facilities to the location of secondary schools. The combined influence of these factors militate against the proposal to locate health facilities on individual campuses. The proposal is for the development of a collaborative system to ensure adequate health care for clients of the services.

Within the model, the school nurse or deputy, plays a vital role in the delivery of the health services. Essential characteristics of health service deliverers, as is the case of other service deliverers in the programme, include objectivity, respect for students, the ability to empathise and be non-judgemental towards clients. These characteristics are important in ensuring consumption of the services by the students who need them.

Pregnancy testing. There are two primary advantages in offering this service in schools. The first advantage is its probable effect on reducing the health risks to student primigravidae who might otherwise progress to the advanced stages of pregnancy without adequate medical care. The Jamaican research indicate that pregnant students

often fail to seek medical care during the early stages of their pregnancies. The neglect may be due partly to the students' attempt at cognitive avoidance or partly to the negative attitudes of service providers in public health care facilities towards pregnant students. Because of the expense involved, pregnant students are unlikely to seek private medical care, hence they enter the advanced stages of pregnancy without having had proper medical care.

Secondly, this on-campus service has the advantage of introducing the pregnant student to the other services of the component. Early verification of pregnancy allows the student more time in which to discover and decide upon her options.

Pregnancy counselling. Pregnancy counselling has been included as a service on the basis of the perceived need for it in the model. None of the programmes which were surveyed included this service, however, it has been considered to be necessary in light of some observed behaviours of pregnant students. It appears that students often carry pregnancies to term by default, rather than by choice. In pregnancy counselling, students may be educated as to their various options and be helped to decide upon a preferred one. Counselling may also include information on the type of medical services needed to maintain or terminate the pregnancy, and where such services are available.

Health referrals. Efficient delivery of the medical services of the health component depends largely on an adequate referral system. Inter-agency co-operation is especially essential between the programme co-ordinator and the administrators of local health facilities. It is

being recommended that a directory of all local health facilities and pertinent information about them be compiled by the school health co-ordinator. Information of this kind could furnish the health co-ordinator with the tool for creating a referral network including all local agencies and key personnel in them. The health co-ordinator should be in a better position then to refer clients to contact persons in specific agencies.

An extension of the referral service would be the procurement of medical appointments for clients. The involement of the school nurse at this stage could help students to get and keep their appointments with less loss of time than if they were to try to make appointments on their own. In addition, the nurse would be in a better position to help clients keep track of their medical progress throughout the pregnancy. The school nurse may also help to expedite official class releases for clients as they become necessary.

The survey of selected Michigan programmes revealed that a health services referral system has been established by each programme. The number of services offered directly, varied with the programme. Consequently, the degree of their dependence on external agencies for the provision of health services also varied. In each case, however, the programmes seemed to depend on these agencies to provide more services than they were able to provide internally. Also, each programme had established strong working relationships with the agencies in order to secure services for their clients.

Maternal health care. Clients are likely to need routine maternal health care which may be co-ordinated by the school nurse. The major thrusts of this unit may be to help clients to plan and develop individual health programmes, to develop a group preparation programme for pre-delivery orientation, and to tie this unit with specific educational units designed for the pregnant student. The more technical aspects of health care may be procured by arrangement with the health agencies. This unit helps to put clients in touch with the health practitioners in the areas in which the clients live.

Counselling. Counselling seems to be an indispensable function of the programmes which were studied (Table 4.8). The research literature also seems to suggest the need for a counselling unit in programmes designed to help the adolescent child-bearer.

The counselling situations involving clients in the programme may vary in order to provide clients with most effective help. Individual counselling upon request, may be most common. Group counselling and "rap" sessions with other pregnant students and recent parents could also be invaluable to clients. The findings from the survey, the literature review and the Jamaican case study (Appendix C) indicate that sutdents build a support system for themselves by sharing their experiences and reassuring each other.

One programme in the study used conjoint counselling because that technique was found to be especially helpful. In conjoint counselling situations, the mother or expectant mother is counselled along with significant others related to her pregnancy. Parents, other family members, and male partners are usually brought together for

such sessions. Whatever the form counselling takes, it is important that the student has the assurance of confidentiality and respect in the counselling situation.

Welfare. Given the family structure and other aspects of the social background of the adolescent child-bearer, the welfare component becomes very important. The Michigan programmes each have elaborate social work components which co-ordinate social services between different agencies, for the client. The Jamaican programme also has a social work / counselling unit. Unlike the social work units of the Michigan-based programmes, the chief concern of the Michigan-based programmes, the chief concern of the welfare component is stabilizing the home environment to make it more supportive for the client. This concern is consistent with indications from the Jamaican case study and the researcher's experience. Indications are that the majority (85%) of the parents of students served by the Jamaican programme were either angry (33%) upset (42%) or disappointed (6%). On the other hand, 9 per cent and one per cent of those parents were accepting and understanding, respectively. The inter-agency co-operation with public welfare agencies is not quite as important as it is to the Michigan programmes. The most important factor determining the relative importance of inter-agency collaboration in the MRPA is that the amount of public assistance is considerably less in Jamaica than in the United States. The counselling department of the school could most appropriately co-ordinate the welfare services.

Home visiting. The model proposes regular visits to the homes of pregnant students. Such visits or other contact might start soon

after the student's pregnancy has been verified; the individual case would determine the time of the visit more precisely. The counsellor might help the parents or guardians to adjust to the news and with the client's consent, help them and the client to decide on the future of the pregnancy.

Inter-agency liasion. Another function of the counsellor may be to assist parents or guardians to identify agencies which may provide assistance to them and the client. Though public assistance may be limited, the agencies specially concerned with child welfare may be able to provide some help for the clients and their parents. There are also some private organizations which might assist on an individual case basis. An ancilliary function in providing this service may be the compilation of a directory of service clubs, benevolent societies and other agencies which may be likely to provide assistance to help in retaining pregnant students in school.

Outreach. The final proposal in the welfare component is outreach to involve the partners, or expectant or putative fathers. The survey of Michigan programmes revealed this to be a desirable but minimally-achieved objective. These programmes and the case study have recognized the importance of involving the male partners in the rehabilitation of the women. To this end, the Michigan programmes are attempting to involve them. The Jamaican case study showed that 56 per cent of the putative fathers had negative attitudes towards the pregnancies. Successfully involving them may help to change the negative attitudes of these males towards the pregnancies and children. Also a positive attitude change could mean more financial, emotional

and moral support for the young mother and her child.

Involvement of expectant or putative fathers or other male partners could take various forms other than in the counselling situations. The project approach to involvement has apparently been successfully used in the Jamaican programme. Here both students and their male partners have developed and maintained an agricultural project which partly supports the sponsored meal programme. Where the resources and facilities permit, other programmes could also try such means of involvement.

Concern for the client's welfare on-campus is evident through all the services which have been advocated. However, it is necessary to be especially concerned about the physical comfort of the clients at different stages of their pregnancies. A lounge area is recommended for pregnant students. Such an area could be used for their relaxation at scheduled or other necessary breaks. A section of this area could be used for group sessions and conjoint counselling also. Provisions and equipping of such an area would enable pregnant students especially, to be able to withdraw privately, as it becomes necessary. This facility has been recommended primarily on the basis of perceived need since it was not investigated in the survey.

As the model is designed, the school counsellor plays a key role in delivering the services of the welfare component. This intense involvement is necessary partly due to the fact that she or he will probably be the only professional consulting with the family. Based on the findings from the Jamaican research and the researcher's counselling experience in secondary schools, the indication is that the

the trauma of the pregnancy is often as great for the family as it is for the student. It has also been observed that families are very important in helping the pregnant student or student parent to remain in school. In addition to the financial and emotional support they provide, families very often provide the only day-care facility available to the student. Also by working with them, school counsellors may be able to help families to understand the long term advantages of helping the client to remain in school until graduation.

Vocational. Vocational counselling and vocational-type outreach into the community are the major activities recommended in this component. It is important that opportunities be created for all students to explore careers and vocations which may be open to them. It is probably even more urgent for the school-age parent to have this knowledge. The yearly career expositions frequently held in secondary schools for all students could be augmented by more direct individual career counselling for the school-age parent. Counselling should enable students to align their interests, abilities and immediate responsibilities.

Other vocational activities may include job placement and/ or training through apprenticeships. Such experience may be arranged for weekends and/or during the school vacations. Where possible, local businesses may be asked for support. On-campus projects, for example, a "tuck" shop operation, or other special ventures could involve students for compensation also.

Support services. The final component is a miscellany of services which support all the components. These services include a

sponsored meal programme. Given the economic backgrounds of most students who are likely to be in the programme, it is necessary to ensure the nutritional standard of at least one meal daily. All the Michigan programmes in the survey and the Jamaican programme have recognized the lunch or breakfast programme as essential. This service helps to ensure healthier mothers and babies, thereby reducing the health risk to the babies.

Most secondary schools operate a meal programme similar to the one advocated by the model. The additional step would be for the school administration to permit all needy pregnant students to participate in that programme at minimum or no cost to them.

Day-care. Day-care is an essential service for the school-age parent. This observation has been supported by the survey of selected programmes (Table 4.8). Other findings in the review of the literature indicate that unavailability of day-care facilities has been a major contributing factor to school drop-out among school-age parents. Ideally, the model advocates provision of these facilities as part of the total programme. That way, students would have the opportunity to learn effective parenting skills in a practical setting, under supervision. Also important mother-infant bonding could be fostered in that situation. In the ideal situation, the parents assume more responsibility for the daily care of their children whereas in truncated services, such responsibilities are usually ceded to other family members, or less frequently, to other paid personnel. Another advantage of providing day-care as part of the total programme is the opportunity to create a laboratory situation to benefit non-pregnated

but susceptible students. The laboratory situation could consequently strengthen the preventive aspect of the programme.

The present structure and resources of the secondary schools are unlikely to permit development of such facilities on-campus at the present time. The model advocates the involvement of community action groups like the Parent-Teachers Association in initiating a day-care service in the locality of the school, primarily to serve school-age parents. Where this is not feasible, students may need the help of their counsellors in identifying the most appropriate day-care arrangements.

Interim follow-up. The interim follow-up is advocated on the basis of perceived need. After students return to school following their delivery, it is to be expected that they will experience some adjustment anxieties. They will probably need additional help in returning to the routine of regular classes. It is being advocated that special counselling continues for them, at least through the term in which they deliver. Special counselling may be phased out to be replaced, where necessary, by a "buddy" system. Buddies may be students who have had similar experiences in the past, or senior students of the Student Council. Counselling at this time would give the needy students some moral support and help them to ease back into routine school activities.

The pro-active and the reactive components are part of a total programme of treatment. The reactive components aim at keeping pregnant students and student parents in school thereby reducing the risk of premature termination of educational opportunities for these students.

Simultaneously, the pro-active component aims at reducing the number of students who face the risk of dropping out of school on account of pregnancy. Both components have as their ultimate purpose to help secondary students to complete their education.

Guidelines for Consumption

The guidelines for consumption indicate the conditions of eligibility for making use of the services offered by the MRPA. The model has been designed to be implemented in secondary schools or other schools with secondary grades.

Clients. All students in secondary grades are eligible to use the services offered in the pro-active component of the model. Any student in the secondary grades may also have access to all of the proposed services. Where students in the same school are also the partners of the pregnant student, or are the expectant or putative fathers, they are also eligible to be served by the programme. Where males other than students in the same school are responsible for the pregnancy, or are the current partners of pregnant students, they are eligible to participate in selected services, for example, counselling and projects, within the specific operational guidelines of the school. Non-student participation should at all times be for greater programme effectiveness and not to create conflicts within the school.

Duration. A student becomes eligible to use the services of the reactive component as soon as pregnancy has been detected. Students are eligible to be served by the programme from then on, through the erm following delivery. After that students may remain affiliated

with the programme, at their discretion.

Mode of Service Delivery

In the United States, programmes designed to deliver special services to the pregnant adolescent and the school-age parent have been implemented in two modes. The options are to provide services through the conventional school setting or in alternative settings; these optional forms of delivery are regarded as "mainstreamed" or "alternative," respectively.

Mainstreaming of special programmes for school-age parents began in Michigan in 1973 only after the state legislature had legally recognized the right of pregnant persons to an education. Other states have made similar recognitions but alternative programmes still outnumber those that are mainstreamed both in the state of Michigan and on a national scale.

Both modes of service delivery have received support from scholars in the field of adolescent sexuality and providers of service to adolescent child-bearers. Smith (1979) and Klein (1975) have argued for mainstreaming of programmes. Their essential arguments have centred on the cost-effectiveness of mainstreamed programmes. They have also argued for the richer socio-emotional environment of the conventional school setting. Kruger (1975) also has argued that the typical special or alternative programme cannot respond to the total programme needs of the adolescent parent or adolescent expectant parent. On the other hand, Washington (1975) favours alternative settings. She has argued that students are better able to receive the

special attention they need in alternative settings, the programmes are more flexible and students are more comfortable being with other pregnant students. However, she noted also that alternative programmes create special problems that are not present in mainstreamed facilities.

Both modes of service delivery received support in the survey of selected Michigan programmes. Programme administrators recognized the need for creating situations where pregnant students or school-age parents were identified for the necessary special attention. In the mainstreamed situations the possibility exists that such students could be ignored, especially where they constitute a small group. However, programme administrators also recognized the danger of stereo-typing that arises in special settings. This observation has been supported by Glathorn (1975) in a discussion of the pros and cons of alternative facilities, generally.

The MRPA advocates mainstreaming as the more appropriate mode for delivering services to Jamaican school-age parents and pregnant adolescents. Alternative programmes will continue to have an important role in delivering services to these students for some time yet. However, mainstreaming is more expediemt and can be more effective and efficient.

Current social and economic factors in Jamaica seem to militate against the establishment of new alternative facilities proportionate to the need for them. Currently existing educational resources are being concentrated upon bridging the gap between the available school facilities and the existing need for them. It is unlikely, therefore,

this present objective into the establishing of separate facilities.

Where programmes are established within existing schools deployment and rescheduling become the key strategies for incorporation since the essential structures and facilities are already in place. Mainstreaming of programmes also ensures that each school has its own programme to take care of its students. Localizing programmes in this way would ensure that rural, as well as urban students, have more equitable access to programmes, unlike in the present situation where facilities are city-based.

The Jamaican case study (Appendix C) has revealed that post-delivery placement of students back into the regular school setting is problematic. Problems arise in finding schools willing to accept them, in related school expenses of books and uniforms, in the availability of adequate transportation. The time lost between delivery and placement is conceivably longer than the recovery period advocated by the model for students in the mainstreamed programmes.

Programmes for these pregnant adolescent or school-age parents should seek to minimize the psychological and economic problems of adjustments for the student. Alternative programmes modeled on the design of the Jamaican case study are of necessity, transitory programmes. These require costly emotional withdrawal from and re-entry into the conventional school setting as well as psychological and emotional adjustments to the interim school environment. Continuation in the conventional school necessitates fewer adjustments which can be eased by an understanding school community.

Finally, the cost factor per programme, is more in favour of

mainstreamed programmes. The findings in the survey of selected Michigan programmes reveal that alternative programmes are substantially more expensive. The comparative costs per student were consdiered within the same school year, for all four programmes. The per student cost of alternative programmes were generally higher than the mainstreamed programme which was surveyed. The findings on the comparative costs are also supported in the literature review. The cost factor is very important and is one which Jamaican educators and service providers cannot afford to ignore.

The MRPA stresses retention of pregnant students and students who are parents, in the secondary schools for the following reasons:

1. Students at this level have passed through highly selective screening.

2. To discard students at this stage is to reduce the possibility of expanding the pool of technical and professional resources which are currently in short supply.

3. To retain students and make it possible for them to graduate is possibly much less expensive than rescreening and replacing them.

4. The socio-economic system requires a secondary school education for effective minimum participation in the labour force. The educational system should make it easier for individuals to function in the economic life and participate in all aspects of national development. The reverse is currently the case for students who drop out of school on account of pregnancy.

5. In a democratic society moral or value judgements seem to be irrelevant bases for denial of educational opportunities to individuals

who have demonstrated educational competence at a given level.

6. School-age parents have a special need for educational competence which could lead to employability and economic self-support.

Summary

The MRPA (Figure 4.4) has proposed a co-ordinated programme of services to be implemented in Jamaican secondary schools. The programme aims to maximize the chances of pregnant students and students who are parents, to complete their secondary education. The model posits that the chance for the individual adolescent child-bearer to be retained in school is enhanced by the overall reduction in the number of newly pregnant students. In support of this position, and in accord with other researchers and administrators of programmes for pregnant students and school-age parents, the preventive aspect of the model has been duly emphasized and the pro-active component built in.

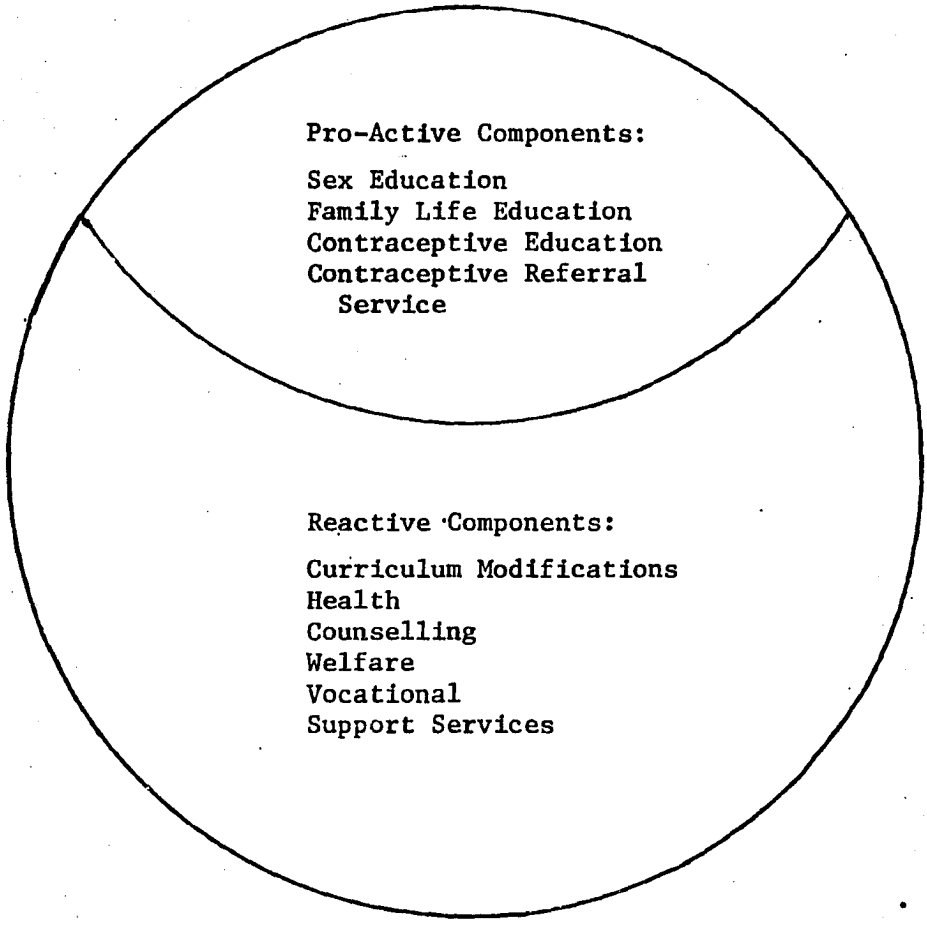


Figure 4.4

Model for Retaining Pregnant Adolescents and School-Age Parents in the Jamaican Secondary Schools

Implementation of the Model

The discussion in this section focuses on the mechanics of introducing and maintaining the model in Jamaican secondary schools.

The MRPA has been designed to be incorporated into the mainstream of the conventional secondary school. Clients of the services advocated by the model would be students of the regular secondary school programme. However, administrative acceptance of the model's philosophy and the advocated flexibility of the curriculum would permit these clients/students to benefit both from the regular curriculum and the special programme.

Ultimately, the responsibility for implementing the model at the building level, belongs to the school principal, through a programme co-ordinator who would assume direct responsibility (Figure 4.5). The willingness of the principal to experiment with the MRPA could be determined by the degree of staff and community support for the model that she or he perceives. For that reason, building support for the model has to be recognized as an important task throughout the implementation stage. Successful implementation necessitates a series of essential steps. These steps include:

1. development of an implementation sequence
2. institutional reorganization
3. identification and use of resources and facilities
4. training
5. field trial
6. phasing in the programme

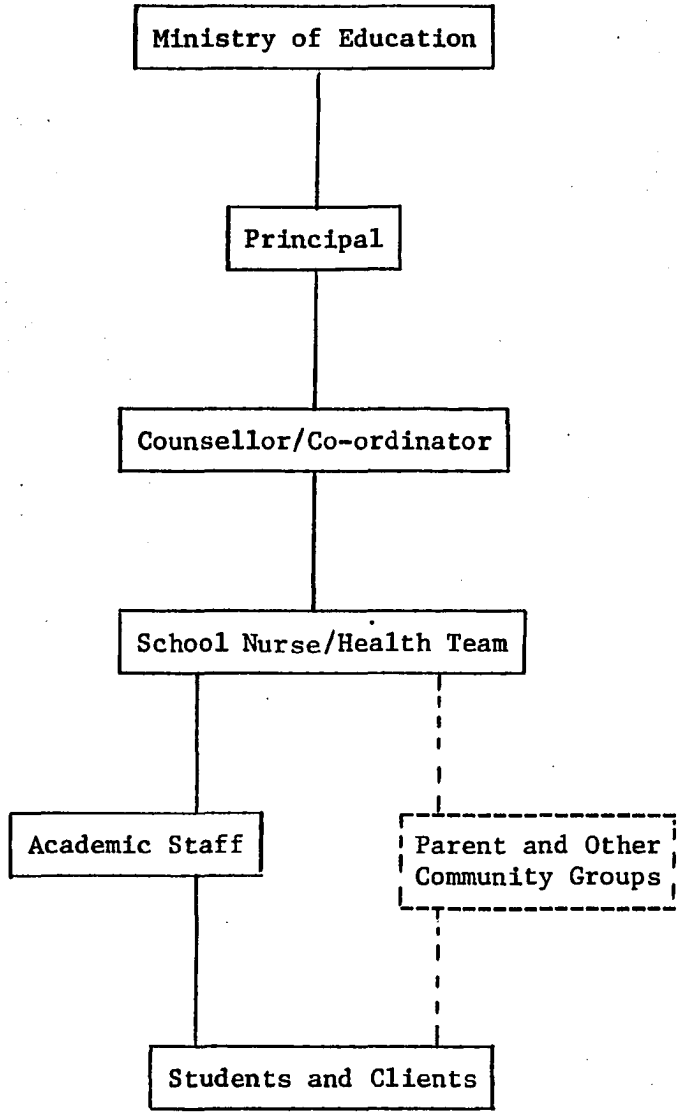


Figure 4.5

Organizational Structure for Implementing the MRPA

A discussion of each step follows.

Sequence

The development of an effective sequence is critical to the successful implementation of the model. It is important that both the school and the larger community be adequately prepared to receive the proposed innovation. Initial resistance on moral grounds is envisaged. Such pockets of resistance as there might be, may be overcome by the devising of effective strategies based upon gradual introduction and presentation of relevant information.

Effective strategies which may be used could include the following:

Identification of a co-ordinator of the programme. Programme co-ordination would not necessarily require a separate staff position. Co-ordination is likely to require blocks of time that could most conveniently be fitted into the schedule of the guidance counsellor. The school counsellor is being recommended to co-ordinate the programme because it overlaps with several of the functions she or he performs normally. Also, the counsellor is more likely than members of the regular teaching staff to have developed the essential rapport with the school and community. The counsellor is also most likely to possess the human skills which are pre-requisites of the position.

Development of plan of action. An advance plan of action could give the co-ordinator additonal control over the implementation stage while also preparing her or him to counter-attack resistance to the model.

Development of administrative support. The support of heads of department and other senior members of staff could be valuable in gaining acceptance of the model. The co-ordinator could make special effort to apprise the senior staff of the philosophy and organization of the model before large-scale attempts are made to install the model.

Management of a public relations campaign. A public relations programme is recommended. This programme may be instrumental in educating school and community groups regarding the purposes of the model. The public relations programme could also be the medium used to solicit and encourage participation from various community groups, particularly community agencies which may be able to offer the recommended services.

Specific group contact. A direct approach to enlist the support of the Student Council and other influential student groups is recommended. Such groups may be prepared to provide moral support for potential clients. Similarly, the Parent-Teachers Association may be courted into giving valuable support to clients.

The situation in the individual school will determine the most effective strategies. The alert co-ordinator will be sensitive to factors operating in her or his school environment and seek to manipulate these to produce the most workable strategies. The selected strategies should aim at building credibility in the model and aiding its smooth implementation.

Institutional Reorganization

Institutional reorganization refers to the changes which may become necessary within a school in order for that school to accomodate the MRPA. These changes may include curriculum re-structuring, deployment and re-scheduling of staff and reallocation of certain facilities.

Problems of scheduling may be anticipated in the initial stages of implementing the model. Dove-tailing of class schedules may need careful attention. In some cases, this particular difficulty may be overcome by developing the alternative units into full optional courses. These may be several strategies for overcoming this difficulty. Whichever strategy is selected will very likely seek to prevent grade repetition or other delayed progress for the client as she returns to the mainstream of the secondary programme.

The achievement of the goals and objectives of the MRPA could be retarded in the present environment of censorship of school-age child-bearers. The desirable attitudinal change may be expedited by educational policies of support for the adolescent child-bearer. While schools cannot control the formulation of supporting policies at the national level, they may formulate their individual policies of support.

Resources and Facilities

The degree of achievement of the stated goals of the model will depend largely upon the resources which are available in and to the

educational system. The single most important resource is the school system itself. As it is currently structured, this system has the target groups of the model as a captive audience. Schools are, therefore, instrumental in bringing the target group naturally to the arena from which the model is to be effected. In doing so, the school structure has eliminated the time and expense which might otherwise be necessary to promote the programme.

The principal resource needs of the MRPA includes the following: (a) an academic staff including teachers with specialist training in human sexuality; (b) guidance and counselling services; (c) access to health and other support services; (d) additional classroom and/or other meeting space. In addition, curriculum flexibility and a philosophical commitment to the model are intangible but invaluable assets. Most secondary schools already possess several of the basic resources. Where necessary, improvisations could provide workable alternatives. Overall, it may be argued that secondary schools possess the structure and physical resources to implement the model adequately.

Training

The importance of integrating the sex and family life education programmes into the general curriculum has been emphasized previously. Equally important is the requirement for these programmes to be presented by specially trained teachers.

Juhasz (1970) specified several characteristics which are essential in teachers of human sexuality. To Juhasz, it was equally

important for teachers to possess the pre-requisite human and technical skills. Where necessary, in-service training programmes may be developed to train teachers for the programme.

Field Trial

Field trial is an essential intermediate stage of the implementation process. Havelock and Huberman (1978) have argued that pilot testing is usually a neglected stage in the implementation of new programmes in developing countries. The neglect is usually caused by the unusual pressure placed on educational systems to produce results within too short a time. In the case of the MRPA, a field trial may be regarded as final validation. Field trial will provide the practical test of its operational feasibility. Also, it provides feedback which is necessary to eliminate structural flaws prior to its promotion for implementation on a national scale.

Field trial should be limited to a small representative number of schools. Closer monitoring of the sample is more likely when the number involved is small. About five schools representing the various types of secondary schools may be selected, the essential criteria for selection being the willingness of principals to participate in the field trial.

An adequate period for the field trial should be determined prior to the actual test. Pre-determination helps to control the process. A period of 9 to 12 months is suggested. A shorter period might not allow sufficient time to observe properly how well the programme fits into the school environment. On the other hand, one year seems to be

enough time in which schools could implement the structural changes and adjust to the model.

Subsequent Phasing of Programme into Other Schools

The formal support for the MRPA is essential. The researcher contends that the current lack of official policy governing pregnant students has inhibited school administrators in their concern for pregnant students and students who are parents. With the official support of the Ministry of Education, it is likely that more school administrators would be more willing to implement the model than would be the case without ministry support. It is recommended that the model be phased into secondary schools, subsequent to an adequate field trial and necessary revision.

Role of Alternative Programmes

The MRPA is specially concerned with students who are currently in school but would be likely to drop out because of pregnancy. The research shows that the current trend is for pregnant students to drop out of school before completing the second cycle of secondary school. Generally, such students drop out before reaching the age (16-17 years) coinciding with the upper age limit of the secondary cycle. These students also have severe educational needs which the regular school may not be able to accomodate.

Alternative programmes are necessary to provide services to students who already have dropped out of school. Such programmes may also provide an alternative for the student who voluntarily wishes to

drop out of the regular secondary school for valid reasons. Students wish to continue their education in an alternative setting may be given that option through the expansion and further development of current alternative programmes, and where possible, creation of a limited number of new programmes.

It is important that the alternative programmes should be integrated into the public school system. Regular support, restructuring and close monitoring could help to bring them closer in line with other secondary schools in the system. Upgrading of the curriculum and support certification for students in alternative programmes. another advantage of aligning alternative programmes with the regular secondary school programmes would be to make the former a more permanent and socially accepted secondary school.

Currently, alternative programmes are largely interim measures which usually necessitate the transfer of students back into public secondary schools. Students lose time in the transfer processes and often experience difficulty in being placed in the public schools. Both the loss of school time and the placement difficulty could be eliminated if the alternative programmes were strengthened to serve the present and foreseeable number of pregnant drop-outs who could not be accomodated in mainstreamed programmes. Gradually, the need for alternative programmes would become less as more pregnant students were retained in their regular schools.

Programme Appraisal

The research previously cited has supported the need for systematic evaluation. The recent survey of selected Michigan programmes also has revealed that systematic evaluation is an essential aspect of programme development and service delivery. Planned appraisal, systematically implemented, is an important function of maintenance of the proposed model.

The actual form of appraisal may vary with the programme, and particularly on the research skills of the programme administrator. Whereas the more sophisticated research and evaluation skills may be unavailable to some programme co-ordinators, simple appraisal techniques may be effective also. One instrument which may be used effectively is the programme report compiled at regular intervals on a consistent basis. Such reports may include details of programme description and cumulative data.

Programme appraisals have specific advantages. They may provide the bases of accountability while they also provide feedback information for further programme development. Finally, programme appraisals may be effective instruments for the measurement of goal achievement.

Chapter Summary

Chapter IV has presented a model for confronting the problem of pregnancy-related school drop-out in Jamaican secondary schools. The model is a synthesis of the review of the literature on adolescent sexuality, a survey of the literature on adolescent sexuality, a survey of selected Michigan programmes; a Jamaican case study; the

researcher's knowledge of the Jamaican society and her professional experience in the educational system of that society.

Successful implementation of the model should decrease the number of pregnancy-related school drop-outs. However, the effect of other social factors could affect the power of the model to retain pregnant students. Factors such as the socio-economic background of the family, or the effectiveness of community support systems could have direct influence on the effectiveness of the model.

Collaboration between implementers of the model, community groups and social agencies is essential. Collaboration increases the possibility for the achievement of the long-term goals of the model, achievement of which could have a salutary effect on the problem and ultimately, the orderly development of the Jamaican society.

CHAPTER V

RESULTS

Introduction

Chapter V reports on the validation of the Model for Retaining Pregnant Adolescents and School-Age Parents in the Jamaican School System (MRPA). This chapter will also discuss the modifications to the model, as suggested by the validators.

Validation

The MRPA was validated by five professionals. These professionals had been identified previously on the basis of the pre-established criteria discussed in Chapter III. Each professional who had been identified met each criterion and participated in the validation process.

Actual validation of the model took place subsequent to the dispatch to, and receipt of the validation materials by each validator. Follow-up meetings were scheduled to take place about ten days after the materials were hand-delivered. Whereas it was expected that each validator would have completed the validation instrument prior to the scheduled meeting, this was not the case on two occasions. On those occasions, the researcher removed herself from the room in which validation took place, in order to guard against contaminating the process by her presence.

All questionnaires were returned at the end of the meetings.

Validating Panel

Each of the five members of the validating panel has maintained close contact with adolescents either in a research- or job-related context. Each member was also knowledgeable of the problems associated with adolescent pregnancies and school-age parenting in their professional capacities.

Members of the panel included:

1. A researcher who has conducted a substantial amount of the research into the social problems associated with too-early child-earing in Jamaica. This member of the panel is also currently the chairperson of, and lecturer in the department of Sociology at the University of the West Indies, Jamaica.

2. The chief administrator in the Guidance and Counselling Unit in the Ministry of Education. This validator is in direct contact with counsellors in Jamaican secondary schools through field-work assignments and supervision. Research into problems of secondary school students has been conducted by the unit administered by this validator.

3. The director of the only national programme which offers comprehensive services to pregnant young women and school-age parents.

4. A principal of a large New Secondary School. This school operates two shifts daily and has an enrollment of 1837 (1978) students (Ministry of Education, Jamaica, 1978b). Approximately 52 per cent of these students are females ranging from 12 to 19 years old.

5. One of two guidance counsellors in a traditional high school. This school also operates the double shift. It has an enrollment of 1002 students (Ministry of Education, Jamaica, 1978b), who range from 11 to 18 years, more than 50 per cent of whom are females.

Reactions to the Model

By following the written instructions which were a part of the validation packet, each validator recorded his or her reactions to the MRPA. Validators were asked to read the model then to record their responses by completing the Validation Questionnaire (see Appendix E). Reports of these responses have been presented in Tables 5.1 to 5.6 and in the discussions in the following sections.

The five response categories: *SA,A,U,DA and SD which were used on the rating scales were also used in reporting the responses. A sixth recording category, no response (NR), was created to report non-responses by the validators.

The model was rated on scales of adequacy and feasibility. Adequacy referred to the degree of sufficiency of the MRPA to achieve its goals, as the model is currently proposed. Feasibility referred to the potential for the model's viability within the present structure of Jamaican secondary schools.

In interpreting the scales, all items rated on the upper end (4 = agreement and 5 = strong agreement) were considered to indicate agreement with the item. Positive ratings were also interpreted to

---

*SA = strong agreement, A = agreement, U = undecided, DA = disagreement, and SD = strong disagreement.

denote the validators approval and support of the item. Ratings on the lower end of the scale (2 = disagreement and 1 = strong disagreement) were considered to indicate validator disagreement and non-support of the items so rated. The final major response category (3 = undecided) indicated the validators' indecision regarding the item or items so rated.

Tables 5.1 to 5.3 summarize responses to item 1 on the questionnaire. Table 5.1 summarizes the responses to the first major goal and to the related short-term goals and objectives. These goals and objectives addressed the perceived threat of too-early child-bearing to the social stability of the Jamaican society.

Discussion of Responses of the Adequacy Scale

Long-term goal. The first long-term goal was highly rated by four of the five validators. The fifth rating indicated neither agreement nor disagreement with the item. One validator's comments relating to this item cautioned against the possibility of over-rating that item (long term goal #1) vis-a-vis other social problems. The comment continued that by linking too-early child-bearing with potential social destabilization, that goal overstated its importance in the total national context.

Short-term goals. In the case of the short-term goals, the majority of the responses indicated agreement. Of the fifteen possible responses for all three short-term goals, fourteen (93%) indicated validator agreement. One respondent indicated indecision. Observations during the follow-up meeting indicated that the disagreement

Table 5.1

Rating of Goals and Objectives Relating to Concerns for the Stability of the Jamaican Society

Goals/Objectives Relating to Stability of Jamaican Society	Responses													
	Adequacy							Feasibility						
	SA	A	U	DA	SD	NR	T	SA	A	U	DA	SD	NR	T
Long-Term Goal														
#1		4	1				5	1	3		1			5
Short-Term Goals														
#1.1		5					5		4		1			5
#1.2	1	3		1			5		4	1				5
#1.3	2	3					5	1	3		1			5
Objectives														
#1.11	2	3					5	3	1	1				5
#1.12	1	4					5	3	1	1				5
#1.21	2	3					5	2	2	1				5
#1.22		4	1				5	3	1	1				5
#1.23		4	1				5		2	1	1		1	5
#1.31		3	2				5			2	1	1	1	5
#1.32		4	1				5		2	1	1		1	5
#1.33	2	2	1				5	2	3					5

was more with the goal (to improve the chances for pregnant students ...to graduate from school) than with the adequacy of the model itself.

Objectives. There were 40 possible responses to the list of objectives relating to the social stability goals. Of these 40 responses, 34 (85%) were in agreement that the proposed objectives were adequate. The other six (15%) responses indicated that the respondents were undecided.

Discussion of Responses on Feasibility Scale

Long-term goal. Four (80%) of the respondents agreed that the proposed goal can feasibly be achieved through the present structure of secondary schools. The fifth respondent indicated disagreement with the feasibility of the major goal. There was no explanation for the disagreement. The argument for the lack of agreement on the adequacy scale cannot be applied here since the two responses originated with different validators.

Short-term goals. There was much agreement for the short-term goals as a set, and as individual entries. There was strong positive support for each sub-goal. Only two of the 15 possible responses indicated disagreement and one indicated indecision. Overall, 80 per cent of the responses supported the feasibility of the short-term goals.

Objectives. The responses to the obejctives relating to the social stability goals showed more agreement than disagreement. Of the 40 possible responses, 63 per cent (25) supported the feasibility of the objectives. On the other hand, actual disagreement with the

feasibility of the objectives was relatively small, with 10 per cent (4) of the responses in disagreement. Of the remaining 11 responses, eight (10%) indicated indecision while the other 3 were non-responses.

Conclusion. Although there was some difference in the way the validators reacted on the two scales, they agreed that the major goal and its sub-categories were both adequate and feasible. On the adequacy scale there was clear support (86% of all responses) overall for the entries. In addition, at least 70 per cent of all responses supported each sub-category. On the feasibility scale, the overall support was not as outstanding (68% of all responses) but the majority of responses in each category and sub-category supported the feasibility of the entries, nonetheless. Even where there was not outright agreement on the feasibility, validators did not clearly disagree either; only 12 per cent of the responses indicated disagreement.

The responses to the goals and objectives relating to the status of Jamaican women are summarized in Table 5.2.

Discussion of Responses on Adequacy Scale

Long-term goal. Four of the five validators agreed that long-term goal #2 (relating to status of women) is adequate. There was one non-response to this item.

Short-term goals. Six of the 10 possible responses to the short-term goals indicated agreement with the adequacy of these goals. No disagreement was expressed but there were four responses indicating lack of agreement. The undertainty expressed on the rating scale indicates some disparity between the self-recorded responses and those

Table 5.2

Rating of Goals and Objectives Pertaining to Status of Women in the Jamaican Society

Goals/Objectives Relating to Status of Jamaican Women	Responses													
	Adequacy							Feasibility						
	SA	A	U	DA	SD	NR	T	SA	A	U	DA	SD	NR	T
Long-Term Goal														
#2		4				1	5	1	3		1			5
Short-Term Goals														
#2.1	1	1	3				5	1	3	1				5
#2.2	1	3	1				5		3	1		1		5
Objectives														
#2.11	2	2	1				5	3	1	1				5
#2.12	2	3					5	3	1	1				5
#2.13	1	2	2				5	3	2					5
#2.14		3	2				5		2	3				5

verbalized in the meetings where validators cited "development of positive self-images" as an important goal. A possible explanation might be the researcher's presence at the meetings.

Objectives. Most (75%) of the responses to the objectives of the goals relating to the status of Jamaican women were positive. In comparison, only 25 per cent of the responses indicated neutral positions.

Discussion of Responses on Feasibility Scale

Long-term goal. The long-term goal relating to the status of Jamaican women received much support. Four of five validators reported it feasible.

Short-term goals. Seven of the ten possible responses to the short-term goals were in agreement compared with one response in disagreement. The other two responses indicated indecision on the part of the validators.

Objectives. There were 20 possible responses to the series of objectives. Of these, 15 responses indicated support for the feasibility of the objectives. No response indicated disagreement or non-support for the objectives. However, there were five neutral responses.

Conclusion. The goals and objectives relating to the status of Jamaican women received clear support on both the adequacy and feasibility scales. In each category and sub-category, except one, at least 70 per cent of the responses indicated support on both scales. The one exception occurred in the sub-category short-term goals, on the adequacy scale. In this case only 60 per cent of the responses

indicated clear support for the adequacy of the proposals. Though 40 per cent of the responses indicated lack of agreement, there was no clear disagreement with the proposals as regarding their adequacy.

There was clear support of the goals and objectives on each scale. Over 70 per cent of the 35 responses on both scales agreed that the proposals were adequate and feasible.

Table 5.3 summarizes the responses to the third major goal and its sub-categories. This goal related to the need to improve the life chances for the children of adolescent parents.

Discussion of Responses on Adequacy Scale

Long-term goal. Table 5.3 shows that the long-term goal and its derivations were supported. Four of the five validators indicated their agreement for this goal on the adequacy scale. The fifth respondent was undecided.

Short-term goals. Regarding the short-term goals, 13 of the possible 15 responses indicated agreement that the goals were adequate. There was no disagreement though two responses indicated indecision.

Objectives. Also, on the adequacy scale, there was more agreement than disagreement with the objectives. Of 40 possible responses 38 (95%) supported the adequacy of the objectives. By contrast there was no disagreement though there was one response indicating indecision, and one non-response.

Table 5.3

Rating of Goals and Objectives Pertaining to Improvement of Life Chances for Children of Jamaican Adolescents

Goals/Objectives Improvement of Life Chances	Responses: Adequacy							Feasibility						
	SA	A	U	DA	SD	NR	T	SA	A	U	DA	SD	NR	T
Long-Term Goal														
#3	2	2				1	5		4		1			5
Short-Term Goals														
#3.1	2	2	1				5	1	2	1			1	5
#3.2	1	3	1				5		3	1		1		5
#3.3	2	3					5		1	4				5
Objectives														
#3.11		4				1	5	3				1	1	5
#3.12	2	3					5	3	2					5
#3.21	2	3					5	3	1	1				5
#3.22	2	3					5	2		1	1	1		5
#3.23	2	2	1				5	2	1	2				5
#3.31	2	3					5	1	3	1				5
#3.32	2	3					5	2	2	1				5
#3.33	2	3					5	2	2	1				5

Discussion of Responses on Feasibility Scale

On the feasibility scale there was more support than non-support for the proposed goals and objectives.

Long-term goal. On the long-term goal, four of the five responses indicated agreement while the fifth response indicated disagreement.

Short-term goals. Of the 15 responses to the short-term goals, 11 indicated agreement for their feasibility. There was only one response to indicate disagreement that one of the goals is inadequate. There were two responses indicating indecision regarding the feasibility of two different short-term goals, and one non-response.

Objectives. Of the possible 40 responses to the series of objectives to the third major goal, 29 (73%) indicated clear agreement. A numerically significant percentage (17.5%) indicated indecision regarding the feasibility of achieving the proposed objectives. There is no clear explanation for the relatively high percentage of neutral responses. However, the researcher's speculation is that the validators may have been skeptical about the community-orientation implied in several of the objectives (#3.21, #3.31, #3.32, #3.33).

The amount of disagreement regarding feasibility of the objectives was relatively insignificant compared to the amount of agreement. Only three responses (7.5%) of 40 indicated disagreement.

Conclusion. In summary, Table 5.3 shows that each category and sub-category of goals and objectives was supported on both the adequacy and feasibility scales. In the case of each category or

sub-category, at least 70 per cent of the responses indicated clear agreement, on both scales. Overall, at least 70 per cent of the possible responses on the adequacy and feasibility scales (60 responses in each case) supported the proposals.

Item 2 on the Validation Questionnaire required validators to react to the proposed introduction of sex or family life education into the junior grades of secondary schools. All five validators supported the proposal on both scales.

In their written comments and in the follow-up meetings, validators indicated that some secondary schools in Jamaica currently include some aspect of sex or family life education in their curricula.

Item 3 on the questionnaire sought the validators' reactions to the pro-active component of the MRPA. These responses have been summarized in Table 5.4.

Table 5.4

Summary of Reactions to the Pro-Active Component of the MRPA

Units of Pro-Active Component	Responses											
	Adequacy						Feasibility					
	SA	A	U	DA	SD	T	SA	A	U	DA	SD	T
Sex Education	2	3				5	3	2				5
Family Life Education	3	2				5	3	2				5
Contraceptive Education	1	4				5	2	3				5
Contraceptive Referral	1	3	1			5	1	3		1		5

All units of this component were consistently supported. In each case, except one, there was total agreement with the proposals on both the adequacy and feasibility scales. In the case of the contraceptive referral unit, one response of the five possible indicated disagreement. One other response indicated a neutral position.

The overall high support indicated in the table was also observed in the validators written comments and the comments made at the follow-up meetings. Validators felt that there is a great need for these services in secondary schools. However, one validator cautioned that schools affiliated with the more "dogmatic" churches could experience more difficulties in providing some of these services.

Questionnaire items 4 to 8 elicited the validators' reactions to the major reactive components of the model. Table 5.5 summarizes the responses to these components

Table 5.5

Summary of Responses to Major Reactive Components of the MRPA

Item	Component	Responses											
		Adequacy						Feasibility					
		SA	A	U	DA	SD	T	SA	A	U	DA	SD	T
4	Curriculum Modifications		4	1			5	1	1	1	2		5
5	Health	1	4				5	1	3		1		5
6	Counselling	1	4				5	2	2	1			5
7	Welfare	2	2	1			5		2	3			5
8	Vocational	2	3				5	3	1	1			5

Analysis of the data in Table 5.5 reveals that there was more support than non-support for the major components of the MRPA. There was unanimous agreement on three components. Curricular modifications was one of two components which received one rating to indicate neutral support. Validators acknowledged the potential benefits of the proposed modifications but one validator cautioned that those benefits would hardly justify the disruptions, especially in the initial states, in view of the relatively small number of students that would benefit in each school.

Similarly, one validator was concerned that the additional personnel which may be required may not be available to implement the welfare component in schools.

The ratings of the major reactive components on the feasibility scale revealed more diversity of responses than ratings on the adequacy scale. However, with the exception of curriculum modifications, all the components received more positive than negative support. There was an equal number of responses indicating agreement and disagreement regarding the feasibility of the curriculum modifications. The fifth response was neutral. Here again, there was concern that the resources necessary to implement the modifications may be unavailable to schools.

As was the case on the adequacy scale, the welfare component was the second component to receive less support than the others. It is also instructive to note that this component received no negative support. Though there was nothing in the comments on this item to explain the low positive support, the researcher speculates that the

ratings reflected the validators' concern for adequate resources to implement this component.

Responses to item 9 (support services) have been summarized in Table 5.6.

Table 5.6

Summary of Responses to the Support Services Component of the MRPA

Services	Responses											
	Adequacy						Feasibility					
	SA	A	U	DA	SD	T	SA	A	U	DA	SD	T
Meal Programme	3	2				5	3	1	1			5
Day-Care	2	1	2			5	1	2	2			5
Follow-Up	3	2				5	3	2				5

All the units of the support services component received high ratings on both the adequacy and feasibility scales. Two of the three proposed services received ratings indicating agreement only. In those cases, all five respondents were in clear agreement with the proposed services. Two ratings on the third service (day-care) indicated that the respondents were undecided.

On the feasibility scale, the responses again indicated agreement for all three units. Overall, there were three responses indicating indecision but there was no response to indicate disagreement with any of the proposed units.

On both scales, each unit was clearly supported. On the adequacy scale, 87 per cent of the responses indicated positive support. On the feasibility scale, 80 per cent of the responses were in agreement, showing support for the proposed units.

Although each unit was strongly supported, it was observed during the follow-up meetings that some validators were concerned about the school's ability to monitor day-care services. These validators also felt that community agencies were better able to offer such services. These concerns were reflected in the responses on the rating scales.

Item 10, the final item on the questionnaire, required validators to rate the proposed structure for implementing the model. Four of the five validators agreed that the structure was both adequate and feasible. However, one validator observed that the Ministry of Education retained ultimate control over innovations such as the MRPA. For that reason, the implementation structure should reflect that control.

Modifications Suggested by Validators

The MRPA was validated as an appropriate model for the Jamaican secondary school context. Validation of the model was done by five experts who also suggested several minor modifications to the Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools. The suggested modifications are presented in the following sections.

1. Introduction of Sex or Family Life Education. Two validators have suggested that the model should be expanded so that the sex or family life education unit could apply to age groups other than that

specified by the MRPA. Modifications would advocate these curricular offerings to pre-secondary school students at the lower end of the age limit, and to tertiary students at the upper end.

Discussion. The decision to apply this component of the model to all educational levels would necessitate organizational and other considerations which were not a part of the structure of the MRPA. The organization of educational institutions and the other critical factors operating at the primary and tertiary levels conceivably, does vary considerably from those operating at the secondary level. For that reason the MRPA would be inapplicable at those levels in its present structure. The researcher acknowledges the importance of emphasizing sex or family life education at all levels but concedes that without more knowledge of how education is organized at other levels, it would be inappropriate to advocate implementation of any part of the MRPA at a level for which it was not originally designed.

However, the suggestion by one validator to expand the proposal to include population education was favourably considered by the researcher. Population education could be integrated into the present structure of the model and be introduced through numerous existing subject areas.

2. Sponsored Meal Programme. One validator suggested a more restricted meal programme than that proposed in the model. The suggestion was made in light of the perceived shortage of resources faced by most Jamaican schools. Modification of the model would extend the meal programme only to carefully screened students.

Discussion. The suggested modification seems sound in view of

the stringent economic circumstances in most schools. Secondly, careful screening is advisable to discourage unnecessary operating costs in the model.

The suggestion can be incorporated into the model with only slight changes in the language.

3. Implementation Structure. One validator argued for clarification of the Ministry of Education's role in the implementation of innovations such as the MRPA.

Discussion. The Ministry ultimately controls all aspects of the operation within secondary schools. The observation made by the validator was well-received. The suggestion will be incorporated into the model and the structure for implementation chart will reflect this modification.

4. Duality of the Problem. Three validators suggested that the problem being addressed by the MRPA may be treated as two separate problems. The retention of pregnant school girls and the retention of school-age parents were perceived as two individual problems. The second problem was regarded as more manageable at this time.

Discussion. Several validators observed in the meetings that the Jamaican society was not ready, and would be unwilling to approve the retention of pregnant students in secondary schools. The validators also observed that retention of such students would be perceived as approval of sexual permissiveness and condonement of immorality among Jamaican youths. For that reason, they insisted that certain sectors in the society would baulk at the innovation.

In view of the preceived resistance, operationally, it might be

advisable to consider the problem as a duality as suggested by the three validators. However, the researcher is concerned that this approach would fragment the problem unnecessarily. Fragmenting the problem would reduce the intended impact on the total educational problem which has been exacerbated by adolescent child-bearing. The literature review has cited research which claims that pregnant students are more likely to complete their education if they remain in school during their pregnancies. There is also research evidence claiming that the reverse is also true. Similarly there is much research to refute the claim that the presence of pregnant students would lead automatically to sexual permissiveness and would encourage other school-age pregnancies.

The researcher is arguing here that retaining all adolescent child-bearers is one complex problem which should be treated as a whole. She is also suggesting that while the society continues to be intolerant of adolescent sexuality and child-bearing, the total society continues to pay heavily for penalizing the adolescents. The school has an educational responsibility to all its students. If this responsibility is be be met, schools must consider educating both their pregnant and non-pregnant students, while working to convince the society of the wisdom of this approach.

Summary

In Chapter V, the reactions of the Validators to the MRPA were presented and discussed. In reporting the validators' reactions, each item on the Validation Questionnaire was analyzed and discussed. The

The subsequent discussion was supported by the ratings on the adequacy and feasibility scales and by comments and observations made during the follow-up meetings.

According to the ratings on each item which related to aspects of the model, the researcher concluded that the MRPA is valid. Each component received approval in at least 70 per cent of the ratings, on both the adequacy and feasibility scales. Furthermore, there was a consistently high degree of agreement with the adequacy and feasibility of the units within the categories. Such agreement indicated internal approval in addition to the overall approval.

The MRPA has been validated by the strong support for the proposals individually and collectively. The model is, therefore, deemed appropriate for Jamaican secondary schools.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The main purposes of Chapter VI are to summarize the study, present conclusions based upon the findings of the study and make recommendations for the alleviation of the problem identified in the study.

The study undertook to investigate the problems associated with dolescent child-bearing, especially in Jamaica and the United States. The summary of the study attempts to encapsulate the essential steps in the investigation. The conclusions have been drawn, based on the findings from the literature review, findings from the programme survey and the results of the validation process. The recommendations have been made based upon the researcher's interpretation of the factors which are in juxtaposition in the problem situation, her interpretation of the social implications of the problem.

Summary

The two major purposes of the study were:

1. To develop a model suitable for retaining pregnant students and school age parents in Jamaican secondary schools.

2. To validate the model which was developed.

There were also two sub-goals of the study. The first was to establish the magnitude of the problem of adolescent child-bearing in

Jamaica and the United States, by conducting an extensive review of the literature. The second sub-goal was to survey a sample of programmes which provide services to pregnant adolescents and school-age parents, who comprise the target population of the study.

Documentation of the extent of the problem and the programme survey were functional in the achievement of the major goals. The survey was conducted on a sample of programmes in the state of Michigan. The findings from the survey and findings from the literature review comprised the major bases of the proposed model.

Validation of the Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools was carried out in Jamaica. A panel of experts conversant with the problem and knowledgeable of the Jamaican society were the validators.

Conclusions

The following conclusions were drawn, based upon the review of the literature:

1. Adolescent child-bearing has escalated both in Jamaica and the United States over the last twenty years, despite the declining population trend in the United States, and in Jamaica, to a lesser degree. Adolescent child-bearing is a problem in both societies because of the large numbers which are involved and also because of the rate of escalation. The medical, health and social implications of the problem are also of serious concern in both societies.

2. Documentation of the problem of adolescent child-bearing in Jamaica is, at this stage, less than adequate. Exact data on the

numerical significance of the problem are as yet lacking. Similarly, a profile of Jamaican adolescents susceptible to early pregnancy is yet to be developed.

3. There is the need for more intervention strategies to counter or alleviate the problem of adolescent child-bearing in Jamaica and the United States. Where intervention strategies do exist, they are primarily reactive. There is also a grave need for a commitment by the respective societies to implement preventive strategies.

4. To date, the Jamaica Ministry of Education has articulated no policy to govern the treatment of pregnant adolescents and school-age parents in Jamaica.

The following conclusions were based on findings from the Michigan programme survey:

5. The impact of adolescent child-bearing may be successfully reduced by delivery of comprehensive services to pregnant adolescents and school-age parents.

6. Programmes intended to counter the impact of adolescent child-bearing are less expensive and have the potential to be more effective when they are delivered in the conventional school setting than when they are delivered in alternative settings.

The following conclusion was drawn, based upon the findings from the validation process:

7. The model which was developed for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools is both adequate and feasible to function as proposed.

Recommendations

The following recommendations have been made according to the perceptions of the researcher regarding the problem in Jamaica. The decision to act upon any or all of these recommendations is primarily that of the Jamaican Ministry of Education.

The recommendations to improve the data base of the problem in Jamaica are that:

1. The Jamaican Ministry of Education should formulate policy to govern pregnant adolescents and school-age parents regarding their continuation in the school system.

2. The Ministry of Education should appoint a committee to study and report on the extent of the problem of adolescent child-bearing among secondary school students. Special attention should be paid to the relationship of students to the educational system within the first year, subsequent to their pregnancies. The study committee should comprise educators, other related professionals and community persons.

3. The Ministry of Education should encourage more research into the problems associated with adolescent sexuality in Jamaica. A primary focus of the research should be to develop a profile of students and susceptible to adolescent pregnancies. The data from the research could be used in developing relevant and preventive strategies.

The recommendations to address the need for intervention strategies are that:

4. The curricula of all government supported secondary schools

should include instruction and/or other learning opportunities in human sexuality and family life education. Instruction in sex education, contraceptive education, development of responsible attitudes within interpersonal relationships, and responsible parenting are especially recommended. The different categories of instruction and/or learning opportunities should be integrated into the curricula and supported by Ministry of Education policies.

5. Personnel should be trained to provide instruction and information in the areas of human sexuality, previously recommended. In-service training is recommended in order to help supply the immediate need for specially trained personnel to work in the programme.

6. The Ministry of Education should identify a model suitable for alleviating the problem of adolescent child-bearing and for retaining adolescent child-bearers in secondary schools. The Model for Retaining Pregnant Adolescents and School-Age Parents in Jamaican Secondary Schools that has been developed in this study, has been validated and is suitable to achieve those purposes.

7. The model identified by the Ministry of Education should be implemented at the secondary school level. Provisions for field testing and evaluation of the model should be built into the implementation process.

8. Pregnant students and adolescent parents should be retained in government-supported secondary schools. The mainstreamed mode of service delivery is recommended for students so retained.

APPENDIX A

COVER LETTERS TO ADMINISTRATORS OF SELECTED MICHIGAN PROGRAMMES

WESTERN MICHIGAN UNIVERSITY

COLLEGE OF EDUCATION
Department of Educational Leadership
Community Leadership Training Center

KALAMAZOO, MICHIGAN
49008

14th November, 1980

Dear

Dr. Carol Smith of Western Michigan University and a researcher in the area of adolescent pregnancies and school-age parenthood has talked with me about your programme.

I am a doctoral student at Western Michigan University. As part of my dissertation research, I recently developed an instrument for the study of selected Michigan programmes for pregnant adolescents and school-age parents. I would appreciate your help in pilot-testing this instrument.

I would like to interview you on Tuesday, 18th November, 1980, sometime in the afternoon; I hope to set a definite time by telephone.

I have included a copy of the Interview Schedule so that you may familiarize yourself with the type of information being sought, prior to the actual interview.

Thanks for helping.

Yours truly,

D. Deloris Brissett

WESTERN MICHIGAN UNIVERSITY

COLLEGE OF EDUCATION
Department of Educational Leadership
Community Leadership Training Center

KALAMAZOO, MICHIGAN
49008

19th November, 1980

Dear

Too-early child-bearing has become an international problem and the indications are that it is also a problem in Jamaica.

I am a Jamaican, and a doctoral student engaged in dissertation research at Western Michigan University. One component of the study I am conducting is a proposal for delivering services to pregnant adolescents and school-age parents in the Jamaican setting. The model being proposed draws upon the types of programmes which have been established in Michigan.

Four programmes have been selected as examples. Your programme is one of those selected.

Your decision to participate in this study will help to expand the body of available knowledge on too-early child-bearing, especially regarding the provision and administration of services for the adolescent parent.

Following the dispatch of this letter and interview schedule, I will be telephoning you to arrange a convenient time when I will visit with you. At that time I will interview you regarding the development and implementation of your programme. I would like to suggest that you read the interview schedule prior to my visit to get an idea of the type of information I am seeking.

Thanks for your time and cooperation.

Yours truly,

D. Deloris Brissett

APPENDIX B

INTERVIEW SCHEDULE FOR STUDYING SELECTED PROGRAMMES FOR PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN MICHIGAN

INTERVIEW SCHEDULE FOR STUDYING SELECTED PROGRAMMES FOR PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN MICHIGAN

by

D. Deloris Brissett

Western Michigan University

IMPORTANT 1. The information obtained through this instrument will be treated confidentially.

2. In items where choices are indicated, please place a check (✓) in the parentheses preceding your best choice.

3. Items 1 and 2 are optional; respond if you wish.

4. Please respond to all other items as accurately as you can.

1. The name of your programme is _____

2. Your programme is located in _____ school district.

3. The programme was initiated by

( ) Volunteers ( ) State/Federal gov't. ( ) Other

4. How many years has the programme been operating?

( ) years

5. The major goals of your programme are: (You may check several.)

( ) to minimize educational interruption for pregnant adolescents and school-age parents.

( ) to be a primary support system to pregnant adolescents and school-age parents.

( ) to reduce the incidence of high-risk babies.

( ) other(s): _____

_____.

6. How many students has this programme served annually, for each of the past 5 school years?

_____ 1979 - 1980 _____ 1978 - 1979

_____ 1977 - 1978 _____ 1976 - 1977

_____ 1975 - 1976

7. How many students has the programme served in the following age categories, yearly, for the last 5 years?

Years	Age Categories in Years			
	10 yrs. & under	11-13	14-16	17-19
1979-80				
1978-79				
1977-78				
1976-77				
1975-76				

8. Your methods of selecting students into the programme include the following: (You may check several.)

( ) referrals from school counsellors.

( ) referrals from family planning clinics/hospitals.

( ) referrals from private physicians.

( ) student walk-ins.

( ) other(s): _____

_____.

9. What percentage of repeat pregnancies occurs among students of the programme, yearly?

( ) % ( ) 0.00% ( ) don't know

10. The average length of the time between first and second pregnancy is:

( ) Years ( ) don't know

YOU MAY CHECK SEVERAL CHOICES FOR EACH OF ITEMS 11-13 and 15.

11. How do you decide which services to include in the programme?

( ) needs assessment
( ) Based in theory of too-early pregnancies
( ) client demand
( ) administrative decisions
( ) educated guesses
( ) availability of resources
( ) other(s) _____

12. What are the major services offered by this programme?

( ) academic curriculum
( ) pre-natal health care
( ) parental involvement
( ) post-natal health care for mother
( ) work study
( ) child care and development
( ) skills training/job placement
( ) hospital orientation before delivery
( ) inter-agency laison (client centered)
( ) breakfast/lunch programme

( ) other: _____

13. The preventive aspects of your programme are:

( ) sex education
( ) contraceptive education
( ) parental involvement
( ) other(s): _____
_____
( ) family life education
( ) contraceptive dispensation
( ) community awareness

14. Does this programme involve the expectant father?

( ) Yes ( ) No

(If Yes, work through items 15 & 16; skip to item 20. If No, skip to item 17.)

15. What specific activities are expectant fathers involved in?

( ) parenting classes
( ) group interaction
( ) self-help project
( ) family life education
( ) preparation for labour and delivery
( ) others( ) _____
_____

16. How do the expectant fathers participate?

( ) regularly ( ) sporadically

17. Has the programme attempted to involve expectant fathers?

( ) Yes ( ) No ( ) N/A (See item 14.)

(If Yes, proceed to item 18; if No,proceed to item 19.)

18. If the response to item 17 was Yes, why was the attempt to involve expectant fathers unsuccessful? (You may

check several.)

( ) indifference of expectant fathers

( ) resistance by students

( ) inability to reach expectant fathers

( ) other(s): _____

19. If response to item 17 was No, why wasn't the attempt made to involve expectant fathers?

20. Please check the personnel who serve the programme regularly, and indicate the number in each capacity.

( ) academic staff ____

( ) social workers ____

( ) care-givers ____

( ) physicians ____

( ) nurse ____

( ) psychologists ____

( ) program administrators ____

( ) counsellors ____

( ) other(s) ____

21. What is the annual budget for the programme?

_____

22. How is the programme funded? Indicate percentage of budget contributed by each source.

( ) foundations _____% ( ) direct gifts _____%

( ) local gov't _____% ( ) state gov't _____%

( ) federal gov't _____% ( ) other(s) _____%

_____%

23. List the specific community support systems (emotional, financial, health, child-care, etc.) apart from your programme, which are available to your students.

a. e.

b. f.

c. g.

d. h.

24. What percentage of students return to their home-school after delivery?

( ) % ( )not applicable

25. Is there an established time limit for students to remain in the program?

( ) Yes ( ) No

26. If the response to item 25 is Yes, please check limit.

( ) until delivery

( ) through semester following delivery

( ) until high school completion

( ) other: _____

27. How is "student drop-out" defined in this program?

28. How many students dropped out during the following years?

Years	Age Categories in Years			
	10 yrs. and under	11-13	14-16	17-19
1979-80				
1978-79				
1977-78				
1976-77				
1975-76				

29. Are returnees to their home-school regarded as drop-outs from the programme?

( ) Yes ( ) No

30. What is the current racial breakdown of students in the programme?

_____% Black _____% White _____% other

31. How many students in the programme receive Public Assistance (social security, medicaid, direct relief, ADC, WIN)?

( ) % ( ) 0.00% ( ) don't know

32. How much collaboration is there between:

a. The program and the home school

( ) a great deal ( ) minimal ( ) none ( ) N/A

b. The programme and the community

( ) a great deal ( ) minimal ( ) none

33. Briefly state your arguments for or against providing programmes for pregnant adolescents and school-aged parents within the conventional school environment:

34. Briefly state your arguments for or against providing programmes (described in item 33) in alternative settings:

35. To whom do you report directly, in your capacity as director/co-ordinator of this programme?

( ) building principal ( ) advisory council

( ) school board ( ) other: _____

36. Is your programme systematically evaluated?

( ) Yes, internally ( ) Yes, externally

( ) Yes, internally and externally ( ) No

37. Other Comments:

List the most successful services your programme has offered.

a.

b.

c.

d.

38. What were your most successful strategies in offering the programme?

a.

b.

c.

d.

APPENDIX C

JAMAICA WOMEN'S BUREAU PROGRAMME FOR ADOLESCENT MOTHERS WOMEN'S CENTRE

JAMAICA WOMEN'S BUREAU PROGRAMME FOR ADOLESCENT MOTHERS WOMEN'S CENTRE

Case Study

I. Introduction

The Women's Centre was set up by the Jamaica Women's Bureau in January 1978, as the first attempt in the Caribbean to deal with the problem of interrupted education amongst our young due to early pregnancy.

II. Objectives

1. The Women's Centre programme is designed to continue the education of girls who get pregnant while still at school and to assist these girls to re-enter the school system after the birth of their babies. It is an outreach programme operating in the urban areas of Kingston and the surrounding urban, sub-urban and rural areas of St. Andrew. It should be noted that the Centre is non-residential.

2. Exact data on the number of teenagers who get pregnant is not available. However, statistics culled from the largest maternity hospital in Kingston (Jubilee) show that for the last 15 years, pregnancies amongst teenagers have increased steadily. In 1976 and 1977 over 30% of the hospital's total yearly births were to teenage mothers.

3. To compound the problem, the bulk of these mothers were attending school when they became pregnant. The penalties for becoming pregnant have been harsh. Pupils were not allowed to re-enter the educational system after the birth of their child. They were, therefore, doomed to swell the already large force of unskilled and unemployable women. Equally as bad, they consequently fell into the pattern of having child after child, continuing the process of underdevelopment into the next generation. In denying these children their right to re-enter school and continue their education, we were, in the process, wasting the most valuable of our resources--people.

4. A practical programme had to be devised, therefore, to:

(a) intervene so as to delay pregnancy amongst young women in Jamaica;

(b) continue the education of girls who became pregnant in school, returning them to the normal school system after the birth of their child;

(c) provide our young women with the inner strength, self-respect and dignity to withstand the pressures associated with ghetto life;

(d) the creation of a positive self-image in our young women;

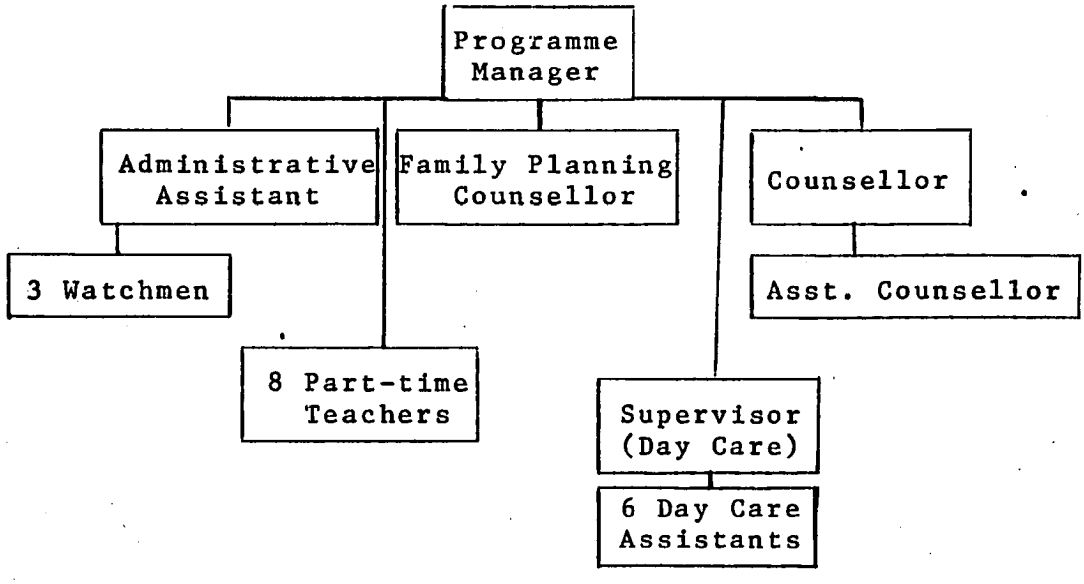
(e) provide our young with a knowledge of life in general, encouraging them to be women in the fullest sense of the word.

5. The objective was to assist 160 students during the two-year period, 1978 to 1979, of the pilot project.

III. Work Plan

1. Funding was obtained from International Planned Parenthood Federation, the Pathfinder Fund and the Government of Jamaica. The Government provided a large building centrally located, converted the double garage into a day nursery, provided day nursery staff and paid all utility costs.

2. Staffing is as follows:



3. Girls are referred by counsellors, teachers, antenatal clinics, government agencies, such as the Family Court, word of mouth, etc. Due to pressure of applicants

a shift system was established. In each session (sessions coincide with the three school terms) 40 students attend the morning shift, another 40 the afternoon.

4. The Centre takes four approaches to reach and motivate programme participants:

(a) Participants enter the programme in the afternoon sessions. While academic subjects are taught, the emphasis is on individual or group counselling, and the encouragement of a positive self-image.

(b) By the second term, most of these girls have had their babies and they therefore move into the morning session. Through their prior counselling they are now "education oriented" and the course concentrates on academic subjects, Family Life, Sex and Family Planning Education.

(c) As a practical approach to learning and to ensure that mother and child are well nourished during pregnancy and after, the Centre serves a nutritious breakfast, lunch and afternoon snack.

(d) "Rap Sessions" are held with students, "baby fathers" and parents, and all are encouraged to participate in social and work-related events.

5. At the end of a session all eligible morning shift students are placed in appropriate secondary, high or

training institutes. In most cases, they are not returned to the same school.

IV. Evaluation Data

1. During 1978, 104 students were accepted at the Centre, and in 1979, 130 aged 13-17 years. In the two years of the pilot operation, therefore, the Centre has surpassed its original objective of 160 girls. These figures do not include a number of young women who, although not eligible to enter the programme, were nevertheless assisted by the Centre.

2. Drop-outs from the Centre programme totalled eight during 1978 and 13 during 1979. In comparison, drop-outs (for reasons other than second pregnancy) after replacement into the school system for the years 1978-79 totalled 29. It is interesting to note that all except one dropped out from placement at the new secondary schools, only one from a training centre and none from high schools. Most of these drop-outs found it impossible to continue due to their economic situation and most of them are now working.

3. The total of second pregnancies recorded amongst those students who completed the Centre programme for the two year period now stands at ten or approximately 4%.

4. Late in 1979 a Family Planning Counsellor was added to the staff in the hope that this will even

further reduce the incidence of second pregnancies.

5. An evaluation of the two year project identified some problem areas.

(a) An increasing inflow of high school students places a heavy work load on teachers. There is a very marked difference in academic standards between high school, technical and secondary students but, nevertheless, it is impossible cost-wise to split shifts into grades. A dedicated staff has given the high school students extra classes after hours but the Centre is attempting to find other solutions; among these may have to be separate centres for high school students. Sixth form students from a local high school are at present, assisting in the coaching of O'Level students.

(b) There have been problems with students returning to their new schools without grants for uniforms, boarding, etc. The Ministry of Education has agreed to give the Centre funds to assist where necessary.

V. Projection

1. As of January 1980 the Government of Jamaica assumed complete responsibility for the Centre. The Women's Bureau has made application to funding agencies such as U.N.F.P.A. for an expansion of the

programme. It is envisaged that at least one other Centre will be set up in Kingston and one in a rural area during the year 1980.

DATA ON PARTICIPANTS OF JAMAICAN ADOLESCENT WOMEN'S PROGRAM 1978

1. 65% of the respondents were under the age of 16.

2. 95% of the respondents decided to continue the pregnancy and keep the baby.

3. Socio-economic data:

   a. 89% of the respondents consider themselves poor.

   b. 48% of the respondents household heads are unskilled workers or unemployed.

   c. Only 1% of the respondents (2) live in a house owned by the head of the household. 52% live in one room.

   d. If length of time at present address can be considered an indication of mobility and/or socio-economic stability, 49% of the respondents have lived at their present address less than 5 years.

4. 75% of the respondents are from families of 4 or more children and 52% come from families of 6 or more children.

5. Only 29% of the respondents live in a two-parent family.

   a. 42% live in a single parent household.

   b. 17% live with a relative other than a parent.

   c. 12% live with non-relatives or on their own.

6. As might be expected, 81% of the respondent's parents were unhappy about the pregnancy.

7. 97% of the respondents were eager to return to school and 65% had ambitions typical of many girls their age --teacher, nurse or secretary.

8. 45% of the baby's fathers were aged 20-24 even though 65% of the respondents were under age 16.

9. 68% of the respondents still maintain a good or fair relationship with the baby's father. 61% receive financial support from the father and 43% of the fathers accepted or were happy about the pregnancy.

10. 36% of the fathers were unemployed or in unskilled jobs, but in general, they had better jobs than the head of the respondents' households. This was probably influenced by the fact that 33% of the respondents are <u>not</u> living in father-supported households.

TABLE 1

AGE OF RESPONDENT

Age	#	%
12	1	1
13	7	4
14	23	15
15	70	45
16	39	25
17	13	8
18	3	2
Total	156	100%

TABLE 2

RESPONDENTS' PERCEPTION OF SOCIO-ECONOMIC STATUS

Socio-Economic Status	#	%
Poor	139	89
Fair-Good	17	11
Total	156	100%

TABLE 3

EMPLOYMENT OF HEAD OF HOUSEHOLD

Employnent	#	%
Professional, Technical	3	2
Business Managers, Officials, Proprietors	9	6
Clerical Workers & Sales Workers	8	5
Craftsmen, Foremen	7	4
Operatives	17	11
Unskilled, Service & Domestic Workers	60	38
Unemployed	16	10
N/A	36	23
Total	156	100%

TABLE 4

LENGTH OF TIME AT PRESENT ADDRESS

Length of Time	#	%
Less than one year	30	19
1 to 2 years	28	18
3 to 4 years	18	12
5 to 6 years	11	7
7 to 10 years	16	10
More than 10 years	32	21
N/A	21	13
Total	156	100%

TABLE 5

HOUSE SIZE

House Size	#	%
One room	2	1
Apartment	80	51
House-Rent	26	17
House-Own	2	1
N/A	46	30
Total	156	100%

TABLE 6

FAMILY SIZE

Family Size	#	%
1 child	3	2
2	5	3
3	14	9
4	20	13
5	16	10
6	25	16
7	15	10
8	20	13
9	10	6
10	5	3
11+	6	4
N/A	17	11
Total	156	100%

TABLE 7

HOUSEHOLD HEAD BY AGE OF RESPONDENT

Age	Household Head	#	%
12	Father & Mother	1 (1)	
13	Father & Mother	5	71
	Mother Only	1	14
	Baby's Father's Mother	1 (7)	14 (99%)
14	Father & Mother	9	39
	Mother Only	6	26
	Father Only	3	13
	Other Relative	2	9
	Boyfriend	2	9
	Alone	1 (23)	4 (100%)
15	Father & Mother	17	24
	Mother Only	34	49
	Father Only	2	3
	Other Relative	11	16
	Boyfriend	3	4
	Guardian	2	3
	Alone	1 (70)	1 (100%)
16	Father & Mother	11	28
	Mother Only	13	33
	Father Only	2	5
	Other Relative	9	23
	Boyfriend	1	3
	Guardian	1	3
	Alone	1	3
	Baby's Father's Mother	1 (39)	3 (100%)
17	Father & Mother	2	15
	Mother Only	6	46
	Other Relative	3	23
	Boyfriend	1	8
	Guardian	1 (13)	8 (100%)
18	Other Relative	1	
	Boyfriend	2 (3)	

TABLE 8

HEAD OF HOUSEHOLD

Head of Household	#	%
Father & Mother	45	29
Mother Only	60	38
Father Only	7	4
Other Relative	26	17
Boyfriend	9	6
Guardian	4	3
Alone	3	2
Baby's Father's Mother	2	1
Total	156	100%

TABLE 9

RESPONDENT'S PLANS FOR BABY

Plans	#	%
Keep	149	95
Father to Take	3	2
Baby Died	2	1
Undecided	1	1
N/A	1	1
Total	156	100%

TABLE 10

PARENT'S ATTITUDE TOWARD PREGNANCY

Attitude	#	%
Angry	52	33
Upset	65	42
Disappointed	10	6
Accepted	14	9
Understanding	1	1
Didn't Care	13	8
N/A	1	1
Total	156	100%

TABLE 11

RESPONDENT'S ATTITUDE TOWARD SCHOOL

Attitude	#	%
Good	152	97
Fair	4	3
Total	156	100%

TABLE 12

RESPONDENT'S EDUCATION

Type of School		Grade	#		%
High	(Form)	1	2		
		2	4		
		3	9		
		4	9		
		5	1		
	(Grade)	8	4		
		11	1	(30)	(19%)
Secondary	(Grade)	7	4		
		8	20		
		9	28		
		10	27		
		11	10	(89)	(57%)
Technical	(Form)	2	1		
		3	1		
	(Grade)	6	1		
		8	1	(4)	(3%)
All Age	(Grade)	6	4		
		7	6		
		8	10		
		9	13	(33)	(21%)
Total			156		100%

TABLE 13

RESPONDENT'S AMBITION

Ambition	#	%
Secretary	33	21
Teacher	31	20
Nurse	37	24
Dressmaker	8	5
Other Professional & Technical Jobs	17	11
Other Clerical & Sales Jobs	14	9
Other Unskilled, Service & Domestic Jobs	8	5
Undecided	8	5
Total	156	100%

TABLE 14

RELATIONSHIP WITH BABY'S FATHER
BY RESPONDENT'S AGE

	Relationship				
Age	Good	Fair	Ended	N/A	Total
12	1				1
13	4		3		7
14	16		7		23
15	41	3	26		70
16	28	1	9	1	39
17	9		4		13
18	3				3
Total	102 (65%)	4 (3%)	49 (31%)	1 (1%)	156

TABLE 15

SUPPORT FROM BABY'S FATHER
BY RESPONDENT'S AGE

	Support			
Age	Yes	No	N/A	Total
12	1			1
13	3	3	1	7
14	12	10	1	23
15	43	27		70
16	26	10	3	39
17	8	5		13
18	2	1		3
Total	95 (61%)	56 (36%)	5 (3%)	156

TABLE 16

ATTITUDE OF BABY'S FATHER TOWARD PREGNANCY

Attitude	#	%
Happy	23	15
Accepts	44	28
Unhappy	53	34
Doesn't Care	21	13
Doesn't Know About It	5	3
N/A	10	6
Total	156	100%

APPENDIX D

CORRESPONDENCE WITH JAMAICAN VALIDATORS

WESTERN MICHIGAN UNIVERSITY

COLLEGE OF EDUCATION
Department of Educational Leadership
Community Leadership Training Center

KALAMAZOO, MICHIGAN
49008

19th November, 1980

Dear .....,

Because of your special expertise in the field of adolescent sexuality and/or professional contact with adolescents, I am requesting your help in validating a model designed to control the incidence of too-early child-bearing in Jamaica.

The model has been designed as part of a study of the problem of adolescent pregnancies and school-age parenting in Jamaica and the United States. In overview, the study reviews the relevant literature, exploring the scope of the problem. The study has also incorporated ideas from selected Michigan programmes, similar to the one being proposed in the study. It also alludes to the implications of the problem for the Jamaican society.

Your comments on, and suggestions for the proposed model will be helpful in its validation. To get your comments and suggestions, I would like to visit with you in your office on the _____ January, 1981, at _____p.m. At that time, I would like to discuss the material which will be forwarded to you prior to our meeting, and to collect the validation instrument.

Should you wish to contact me before our meeting, you may do so at the above address or at the other which has been enclosed. Thanks for helping me in this way.

Yours truly,

D. Deloris Brissett

Alternative address:

D. Deloris Brissett
c/o Mrs. Cytrie Brissett
Alps P.A.
Trelawny, Jamaica

WESTERN MICHIGAN UNIVERSITY

COLLEGE OF EDUCATION
Department of Educational Leadership
Community Leadership Training Center

KALAMAZOO, MICHIGAN
49008

20th December, 1980

Dear

Due to developments in my academic schedule I have had to change my plans to visit Jamaica.

As a result, I would like to reschedule my appointment with you. I would now like to visit with you on January 21st, 1981, at 2:00 p.m. The purpose of the meeting remains the same and the material to be critiqued by you will be sent in advance.

I trust that the rescheduling has caused you minimum inconvenience. I look forward to meeting with you on the 21st of January.

My very best wishes for the holiday season and for the coming year.

Yours truly,

D. Deloris Brissett

WESTERN MICHIGAN UNIVERSITY

COLLEGE OF EDUCATION
Department of Educational Leadership
Community Leadership Training Center

KALAMAZOO, MICHIGAN
49008

10th January, 1981

Dear

Enclosed please find the validation documents about which I have written to you on previous occasions. The documents include (a) the Model (an excerpt of Chapter IV and (b) the Validation Questionnaire.

I do look forward to our meeting on the 21st of January, 1981, at 1:30 p.m. At that time I hope we will be able to discuss your reactions to the model.

Thanks for your co-operation.

Yours truly,

D. Deloris Brissett

APPENDIX E

VALIDATION QUESTIONNAIRE FOR THE MODEL FOR RETAINING PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN JAMAICAN SECONDARY SCHOOLS

VALIDATION QUESTIONNAIRE FOR THE MODEL FOR RETAINING PREGNANT ADOLESCENTS AND SCHOOL-AGE PARENTS IN JAMAICAN SECONDARY SCHOOLS (MRPA)

by

D. Deloris Brissett

Western Michigan University

Please note that the Validation Questionnaire has been designed to elicit your opinions regarding the appropriateness of the MRPA.

Directions:

1. Please complete the instrument after you have read the MRPA.
2. Respond to each item by rating it on scales of adequacy and feasibility (= appropriateness). Rating is on a 5-point scale with 5 representing most agreement, and 1 representing least agreement with the statement:
   5=strong agreement; 4=agreement; 3=undecided; 2=disagreement; 1=strong disagreement.
3. Circle the number on the right that represents the degree of your agreement or disagreement with the statement.
4. Please made additional comments and/or suggestions in the spaces provided.

N.B. Adequacy on the rating scale refers to the degree of sufficiency of the MRPA to achieve its goal. Feasibility used in its present context refers to the viability of the MRPA within the structure of Jamaican secondary schools.

	Adequacy					Feasibility				
	SA	A	U	DA	SD	SA	A	U	DA	SD
1. The goals and objectives of the model (see pp. 102-106) are appropriate to retain adolescent child-bearers in secondary schools.										
Long-term goals										
# 1	5	4	3	2	1	5	4	3	2	1
# 2	5	4	3	2	1	5	4	3	2	1
# 3	5	4	3	2	1	5	4	3	2	1
Comments:										
Short-term goals										
# 1.1	5	4	3	2	1	5	4	3	2	1
# 1.2	5	4	3	2	1	5	4	3	2	1
# 1.3	5	4	3	2	1	5	4	3	2	1
# 2.1	5	4	3	2	1	5	4	3	2	1
# 2.2	5	4	3	2	1	5	4	3	2	1
# 3.1	5	4	3	2	1	5	4	3	2	1
# 3.2	5	4	3	2	1	5	4	3	2	1
# 3.3	5	4	3	2	1	5	4	3	2	1
Comments:										
Objectives										
# 1.11	5	4	3	2	1	5	4	3	2	1
# 1.12	5	4	3	2	1	5	4	3	2	1
# 1.21	5	4	3	2	1	5	4	3	2	1
# 1.22	5	4	3	2	1	5	4	3	2	1
# 1.23	5	4	3	2	1	5	4	3	2	1
# 1.31	5	4	3	2	1	5	4	3	2	1
# 1.32	5	4	3	2	1	5	4	3	2	1
# 1.33	5	4	3	2	1	5	4	3	2	1
# 2.11	5	4	3	2	1	5	4	3	2	1
# 2.12	5	4	3	2	1	5	4	3	2	1
# 2.13	5	4	3	2	1	5	4	3	2	1
# 2.14	5	4	3	2	1	5	4	3	2	1
# 3.11	5	4	3	2	1	5	4	3	2	1

	Adequacy	Feasibility
	SA A U DA SD	SA A U DA SD
# 3.12	5 4 3 2 1	5 4 3 2 1
# 3.21	5 4 3 2 1	5 4 3 2 1
# 3.22	5 4 3 2 1	5 4 3 2 1
# 3.23	5 4 3 2 1	5 4 3 2 1
# 3.31	5 4 3 2 1	5 4 3 2 1
# 3.32	5 4 3 2 1	5 4 3 2 1
# 3.33	5 4 3 2 1	5 4 3 2 1

Comments:

2. Introduction of sex/family life education is appropriate in the junior grades of secondary schools. ... 5 4 3 2 1 | 5 4 3 2 1

3. The services of the pro-active component (see pp. 108-113) are appropriate to aid pregnancy prevention among secondary school students.

sex education ...	5 4 3 2 1	5 4 3 2 1
family life education ...	5 4 3 2 1	5 4 3 2 1
contraceptive education ...	5 4 3 2 1	5 4 3 2 1
contraceptive referral service ...	5 4 3 2 1	5 4 3 2 1

Comments:

4. The curricular modifications (see pp. 124-125) are appropriate in achievement of the MRPA's goals. ... 5 4 3 2 1 | 5 4 3 2 1

Comments:

	Adequacy	Feasibility
	SA A U DA SD	SA A U DA SD
5. The proposed health component (see ppl. 125-129) is appropriate.	5 4 3 2 1	5 4 3 2 1
Comments:		
6. The proposed counselling component (see pp. 129-130) is appropriate.	5 4 3 2 1	5 4 3 2 1
Comments:		
7. The proposed welfare component (see pp. 130-133) is appropriate.	5 4 3 2 1	5 4 3 2 1
Comments:		
8. The proposed vocational component (see p. 133) is appropriate.	5 4 3 2 1	5 4 3 2 1
Comments:		
9. The proposed support services (see pp. 133-136) are appropriate.		
sponsored meal programme	5 4 3 2 1	5 4 3 2 1
day-care	5 4 3 2 1	5 4 3 2 1
interim follow-up ...	5 4 3 2 1	5 4 3 2 1
Comments:		
10. The suggested structure for implementing the MRPA (see pp. 143-146) is appropriate.	5 4 3 2 1	5 4 3 2 1
Comments:		

APPENDIX F

CLIENTS SERVED BY PROGRAMME A AND PROGRAMME B, OVER A FIVE-YEAR PERIOD 1975-1980

Table A.1
Number of Clients Served by Programme A,
by Age Categories, Between 1975 - 1980.

Programme	Year	Age Category			Total
		11 - 13	14 - 16	17 - 19	
A	1979-80	0	65	81	146
	1978-79	3	62	73	138
	1977-78	0	62	78	140
	1976-77	3	82	109	194
	1975-76	0	86	110	196
Total		6	357	451	814

Table A.2
Number of Clients Served by Programme B,
by Age Categories, Between 1975 - 1980.

Programme	Year	Age Category			Total
		<15	15 - 17	18 - 20	
B	1979-80	12	226	209	447
	1978-79	42	219	17	278
	1977-78	12	226	150	388
	1976-77	30	304	150	484
	1975-76	U N A V A I L A B L E			
Total		96	975	526	1597

BIBLIOGRAPHY

Abernethy, V. Illegitimate conception among teenagers. American Journal of Public Health, 1974, 64 (7), 662-665.

Alan Guttmacher Institute, 11 Million teenagers. New York: Author, 1976.

Archer, A. Second chance for teenage mothers? Sunday Gleaner, July 13, 1980, p. 7.

Arehart-Treichel J. America's teen pregnancy epidemic. Science News, 1978, 113 (18), 299: 302.

Baker, B. Acceptance vs. rejection of traditional feminine role: Consideration of women's liberation. Unpublished dissertation. Wayne State University, 1972.

Baldwin, W. Adolescent pregnancy and childbearing--growing concerns for Americans. In Fertility and contraception in America (Vol. II). Washington, D.V.: Government Printing Office, 1978.

Baldwin, W. & Cain, V. The children of teenage parents. Family Planning Perspectives, 1980, 12 (1), 34-43.

Barnes, F. Ambulatory maternal health care and family planning sources. Crawfordville, IN: R. R. Donnelly & Sons Co., 1978.

Baron, S. Sex on T.V. and adolescent sexual self-image. Journal of Broadcasting, 1976, 20 (1), 61-68.

Bedger, J. Teenage pregnancy. Springfield, IL: Charles C. Thomas Publisher, 1980.

Bernard, J. The fourth revolution. In S. Gordon & R. Libby Sexuality today and tomorrow. North Scituate, MA: Duxbury Press, 1976.

Blake, J. The teenage birth control dilemma and public opinion. Science, 1973, 180, 708-712.

Blake, J. Family structure in Jamaica: The social context of reproduction. New York: Free Press of Glencoe, Inc., 1961.

Braen, B. & Forbush, J. School-age parenthood: A national overview. Journal of School Health, 1975, 45 (5), 256-261.

Brodber, E. Abandonment of children in Jamaica. Institute of Social and Economic Research, Mona, Jamaica: University of the West Indies, 1974.

Brody, E. Psychocultural aspects of contraceptive behaviour in Jamaica. The Journal of Nervous and Mental Disease, 1974, 15 (6), 108-119.

Brody, E., Ottey, F., La Granade, J. Complex communication in contraceptive decision-making of Jamaican women. The Journal of Nervous and Mental Disease, 1974, 159 (6), 407-412.

Bruce, J. Adolescent parents: A special case of the unplanned family. The Family Co-ordinator, 1978, 27 (11), 75-78.

Bryan-Logan, B. & Dancy, L. Unwed pregnant adolescents: Their mothers' dilemma. Nursing Clinics of North America, 1974, 9 (1), 57-68.

Califano, J. (Foreword). In P. Smith & D. Mumford. Adolescent pregnancy. Boston, MA: G. K. Hall & Co., 1980.

Campbell, A. The role of family planning in the reduction of poverty. Journal of Marriage and the Family, 1968, 30 (2), 236-245.

Canon, J. Report on assistance to YWCA of Jamaica: Draft proposal or a national adolescent fertility education/service project, Washington, D.C.: American Public Health Association, 1979.

Card, J. & Wise, L. Teenage mothers and teenage fathers: The impact of early childbearing on the parents personal and professional lives. Family Planning Perspectives, 1978, 10 (4), 199-205.

Case, H. & Niehoff, R. Educational alternatives, East Lansing: Institute of International Studies in Education, Michigan State University, 1976.

Chamberlain, P. & Girona, R. Our children are changing. Educational Leadership, 1976, 33 (4), 301-305.

Chilman, C. Some psychosocial aspects of female sexuality. The Family Co-ordinator, 1974, 23 (2), 123-132.

Conger, J. A world they never knew: The family and social change. Daedalus, 1971, 100, 1105-1138.

Cumper, G. The child born out of wedlock. Torch, 1977, 26 (1), 16-27.

David, H. Unwanted pregnancies: Costs and alternatives. In C. Westoff and R. Parke, Jr. (Eds.). Research reports: Demographic and social aspects of population growth (Vol. 1). Commission on Population and the American Future. Washington, D.C.: Government Printing Office, 1972.

Department of Statistics, Demographic Statistics, 1977. Kingston, Jamaica: Author, 1977.

Dryfoos, J. & Heisler, T. Contraceptive services for adolescents: An overview. Family Planning Perspectives, 1978, 10 (4), 223-225; 229.

Easterlin, R. (Ed.). Population change in developing countries. National Bureau of Economic Research. The University of Chicago Press, 1980.

Engstrom, Lars. Teenage pregnancy in developing countries. In A. Parkes (Ed.). Fertility in adolescents. Proceedings of the seventh IPPF Biomedical Workshop, held in London, November 17-18, 1977. Cambridge, England: Galton Foundation, 1978.

Evans, N. New frontiers in education: Challenge to Caribbean women. In E. Benjamin and H. Luard (Eds.). The Caribbean woman: Her needs in a changing society. Washington, May, 1977.

"Exodus" from Michigan will nearly stem population rise. Kalamazoo Gazette, November 23, 1980, p. 1.

Flick, L. Schaefer, E. & Siegel, E. Attachment to the infant in adolescent mothers. Paper presented at the American Public Health Association annual meeting, New York, November 7, 1979.

Franzblau, R. N. Sex and the mass media. In S. Farber and R. Wilson. Sex education and the teenager. Berkely, CA: Diablo Press, 1967.

Frisch, R. Fatness, puberty and fertility. Natural History, October 1980, pp. 16-26.

Furstenberg, F. Unplanned parenthood. New York: The Free Press, 1976.

Furstenberg, F. & Crawford, A. Social implications of teenage childbearing. In P. Smith & D. Mumford. Adolescent pregnancy. Boston MA: G. K. Hall & Co., 1980.

Gebhard, P. The acquisition of basic sex information. The Journal of Sex Research, 1977, 13 (3), 148-169.

Goldmeier, H. School-age parents and public schools. Children Today, 1976, 5, 18-20, 36

Gordon, S., Scales, P. & Everly, K. The sexual adolescent. Belmont, CA: Duxbury Press, 1979.

Harbison, F. Educational planning and human resource development. New York: UNESCO, 1967.

Harris, C. Education and middle manpower development in Malaysia. Ann Arbor, Michigan University, 1970.

Hatcher, R., Stewart, G., Stewart, F., Guest F., Schwatrz, D. & Jones, S. Contraceptive Technology. New York: Irvington Publishers, Inc., 1980.

Havelock, R. & Huberman, A. Solving educational problems. New York: Praeger Publishers, 1978.

Healy, J. Systems planning in the classroom. In C. Sabine (Ed.). Accountability: Systems planning in education. Homewood, IL: ETC Publications, 1973.

Heffner, E. Mothering: The emotional experience of motherhood after Freud and feminism. Garden City, NY: Doubleday & Co., 1978.

Hendrixson, L. Pregnant children: A socio-educational challenge. Phi Delta Kappa, 1979, 60 (9), 263-266.

Hersey, P. & Blanchard, K. Management of organizational behavior. Englewood Cliffs, NJ: Prentice-Hall, 1977.

Howard, M. How can classroom teachers help? Today's Education, 1978, 1 (11), 62.

Jacobson, S. Sex education: A community project. Journal of Research and Development in Education, 1976, 10 (1), 23-29.

Juhasz, A. Characteristics essential to teachers in sex education. Journal of School Health, 1970, 40 (1), 17-19.

Kaplan, I., Johnston, R., Blustein, H. & McMorris, D. Area handbook for Jamaica, 1976 (1st ed.). Washington, D.C.: Government Printing Office, 1976.

Klein, L. Models for comprehensive service--regular school-based. Journal of School Health, 1975, 45 (5), 271-273.

Klerman, L. Adolescent pregnancy: The need for new policies. Journal of School Health, 1975, 45 (5), 256-261.

Klerman, L. & Jekel, J. School-age mothers. Hamden, CT: Shoe String Press, 1973.

Knight, F. Those school-girl pregnancies. Sunday Gleaner, June 8, 1980, p. 2.

Kruger, W. Education for parenthood and school-age parents. The Journal of School Health. 1975, 45 (5), 292-295.

Libby, R. Parental attitudes toward high school sex education programs. The Family Co-ordinator, 19 (3), 234-247.

Lippit, G. Visualizing change. La Jolla, CA: University Associates, 1973.

Lipsitz, J. Adolescent psycho-sexual development. In P. Smith & D. Mumford. Adolescent pregnancy. Boston, MA: G. D. Hall & Co., 1980.

Lowe, C. Health implications of adolescent pregnancy. In D. Bogue (Ed.). Proceedings of an international conference, August 31-September 4, 1976. Arlie, VA, 1976.

Lyle K. & Segal, S. Contraceptive use-effectiveness and the American adolescent. The Journal of Reproductive Medicine, 1979, 22 (5), 225-232.

Manber, M. Adolescents: They seek care outside the system. Medical World News, April 2, 1979, 40-48.

Masters, W. & Johnson, V. An interdisciplinary approach. Personnel and Guidance Journal, 1975, 54 (7), 368-370.

Mednick, B. Teenage pregnancy and perinatal mortality. Journal of Youth and Adolescence, 1979, 8 (3), 343-357.

Menken, J. Teenage childbearing: Its medical aspects and implications for the United States population. In C. Westoff & R. Parke, Jr. (Eds.). Research reports: Demographic and social aspects of population growth (Vol. 1). Commission on Population and the American Future. Washington, D.C.: Government Printing Office, 1972.

Merkle, B. A staff development model for student affairs administrators at private colleges. Unpublished doctoral dissertation, Western Michigan University, 1979.

Michigan, (State of). Pregnant persons: expulsion or exclusion from public school prohibited. [M.S.A. 15.41301]. In Public and local acts of the Legislature of the State of Michigan. Lansing, MI: Department of Management and Budget, 1976.

Michigan Association Concerned With School Age Parents. Michigan Directory of Selected Programs for Pregnant Students and School Age Parents. Author, 1979.

Ministry of Education. Survey on student pregnancies, done on new secondary, high and two tertiary schools in Jamaica. Author, 1979.

Ministry of Education. Five-year education plan (1978-1983) (Draft 2). Kingston, Jamaica: Author, 1978a.

Ministry of Education. Directory of educational institutions. Kingston, Jamaica: Author, 1978b.

Ministry of Education. Annual Report 1976-1977. Kingston, Jamaica: Author, 1977.

Moore, K. Teenage childbirth and welfare dependency. Family Planning Perspectives, 1978, 10 (4), 233-235.

Moore, K. & Waite, L. Early childbearing and educational attainment. Family Planning Perspectives, 1977, 9 (5), 220-225.

Morse, B., Johnson, A. & Johnson, J. Laying the groundwork for an interdisciplinary effort aimed at prevention of pregnancy among middle school students. (Final Report. Project No. DVE 9-1E11. From July 1978 to June 1979) The University of West Florida, Pensacola, Florida.

Motherhood in Jamaica: Children bearing children. Intercom (The International Population Magazine), 1978, 6 (2), 3.

Nkungula, T. Development of a model of technical education for the country of Malawi. Unpublished doctoral dissertation, Western Michigan University, 1979.

Nye, I. School-age parenthood. Washington State University Cooperative Extension Service (Extension Bulletin 667), 1978.

O'Neil, Jr., H. Issues in instructional systems development. New YorK: Academic Press, 1979.

Ogg, E. What about the prospective father? Today's Education, February-March, 1978, pp. 77-79.

Osofsky,. H. The pregnant teenager. Springfield, IL: Charles C. Thomas Publisher, 1968.

Page, E. W. Physically adult, mentally unprepared. IN S. Farber and L. Wilson (Eds.). Sex education and the teenager. Berkeley, CA: Diablo Press, 1967.

Powell, D. Contraceptive use in Jamaica: The social, economic and cultural context. Institute for Social and Economic Research, Mona, Jamaica: University of the West Indies (Working Paper #9), 1978a.

Powell, D. The social and economic consequences of adolescent fertility. University of the West Indies. Paper presented at a JASW Seminar on Adolescent Fertility, Jamaica, May 11, 1978b.

Powell, D. Adolescent pregnancy: Some preliminary observations on a group of urban young women. Univeristy of the West Indies. Unpublished paper, 1977.

Powell, D. Female labour force participation and fertility: An exploratory study of Jamaican women. Social and Economic Studies, 1976, 25 (3), 234-258.

Prosser, R. Residential camps and other programs for out-of-school youths. In M. Ahmed & P. Coombs (EDS.). Education for rural-development. New York: Praeger Press, 1975.

Reichelt, P. & Werely, H. Contraception, abortion and venereal disease: Teenagers' knowledge and the effect of education. Family Planning Perspectives, 1975, 7 (2), 83-88.

Reiss, I. The effect of changing trends, attitudes and values on pre-marital sexual behaviour in the U.S. In S. Gordon & R. Libby Sexuality today and tomorrow. Duxbury Press, Belmont, CA: 1976.

Roberts, G. Population movements in Jamaica. CICRED Series, 1974.

Roberts, G. & Sinclair, S. Women in Jamaica. Milwood, NY: KTO Press, 1978.

Rossing, B. & Kuhn, S. Community problem-solving: Mobilizing the disadvantaged. A training model. Athens, GA: Center for Community Education, University of Georgia, 1977.

Rowley, C. The politics of educational planning in developing countries. New York: UNESCO, 1971.

Ruscoe, G. The conditions for success in educational planning. New York: International Institute for Educational Planning. UNESCO, 1969.

Sadler, C. Adolescent fertility. National Family Planning Board, Jamaica. Unpublished paper. May, 1978.

Sarrel, P. The university hospital and the teenage unwed mother. American Journal of Public Health, 1967, 57 (8), 1308-1313.

Sarrel, P. & Davis, C. The young unwed primapara. American Journal of Obstetrics and Gynecology, 1966, 95 (5), 722-725.

Sengupta, B. Outpatient therapeutic termination of pregnancy at the U.W.I. West Indian Medical Journal, 1977, XXVI (3), 157-163.

Shah, F., Zelnik, M. & Kantner, J. Unprotected intercourse among teenagers. Family Planning Perspectives, 1975, 7 (1), 39-44.

Schultz, T. The economic value of education. New York: Columbia University Press, 1963.

Smith, C. A needs-based curriculum for teenage mothers. Western Michigan University. Unpublished paper presented to the ASCD, Detroit, MI, March, 1979.

Smith, P. Programs for sexually active teens. In P. Smith & D. Mumford. Adolescent pregnancy. Boston, MA: G. K. Hall & Co., 1980.

Smith, W. E. The role of the grandmother in adolescent pregnancy and parenting. The Journal of School Health, 1975, 45 (5), 278-282.

Sorenson, R. Adolescent sexuality in contemporary America. New York: The World Publishing Company, 1973.

Thompson, J. Policymaking in American public education. Englewood Cliffs, NJ: Prentice-Hall, 1976.

Trussel, T. J. & Menden, J. Early childbearing and subsequent fertility. Family Planning Perspectives, 1978, 10 (4), 209.

Tsafrir, J. Pregnancy and abortion in adolescence in developing countries. Paper presented at the WHO Meeting on Pregnancy and Abortion in Adolescence, Geneva, June 24-28, 1974.

United Nations. National report submitted by Jamaica. Submitted to the United Nations Decade for Women. Copenhagen, Denmark, 14th-30th July, 1980. New York: Author, 1980.

Vener, A. & Stewart C. More teenagers sexually active in Michigan. Family Planning Perspectives, 1975, 7 (2), 54-55.

Verway, D. (Ed.). Michigan Statistical Abstract (15th Ed.). Lansing, MI: Division of Research, Graduate School of Business Administration, Michigan State University, 1980.

Washington, V. Models of comprehensive service--special school-based. The Journal of School Health,1975, 45 (5), 274-277.

Wedderburn, C. Factors influencing a national policy in sterilization. In M. E. Schema, et al. (EDS.). Proceedings of the 2nd International Conference, Geneva, Switzerland, February 25-March 1, 1973.

Weisbrod, B. External benefits of public education: An economic analysis. Princeton: Princeton University Press, 1964.

Wells, S. Instructional technology in developing countries: Decision-making processes in education. New York: Praeger Publishers, 1976.

Wilson, C. School leadership today. Boston, MA: Allyn & Bacon, 1978.

Winnick, R. Nutrition during pregnancy. Today's Education, February/March, 1980, 69-71.

Women's Bureau, Jamaica. Questionnaire on implementation during the period 1975-1983, of the World Plan of Action. Adopted at the World Conference of the International Women's Year. Sections I, III, IV, July 3, 1973.

Zelnik, M. Second pregnancies to premaritally pregnant teenagers. Family Planning Perspectives, 1980, 12 (2), 69-76.

Zelnik, M. & Kantner, J. First pregnancies to women aged 15-19: 1976 and 1971. Family Planning Perspectives, 1978a, 10 (1), 11-20.

Zelnik, M. & Kantner, J. Contraceptive patterns and premarital pregnancies among women 15-19, 1976. Family Planning Perspectives, 1978b, 10 (3), 135-142.

Zelnik, M. & Kantner, J. Sexuality, contraception and pregnancy among unwed females in the United States. In C. Westoff and R. Parke, Jr. Research reports: Demographic and social aspects of population growth (Vol. 1). Commission on Population and the American Future. Washington, D.C.: Government Printing Office, 1972.

Zonker, C. The self-concept of pregnant adolescent girls. Adolescence, 1977, 12 (48), 477-488.