

ADOLESCENT MOTHERHOOD: THE HUMAN AGENCY PERSPECTIVE

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL  
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1992

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By

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## DEDICATION

To Rod:

for believing in me

for sharing laughter and tears

for your love

To Andy:

for life

for joy

for wonder

## ACKNOWLEDGEMENTS

I wish to extend my gratitude to Dr. Marjorie White, chairperson of my supervisory committee, for sharing her love of research, her knowledge of social behavior and herself as a mentor and a friend. I would like to thank Dr. Gary Lee for his diligent review and guidance in the development and growth of this research. The time he shared clearly demonstrated his commitment to teaching. I also wish to thank the other members of my supervisory committee, Drs. Nita Davidson, Molly Dougherty, and Hossein Yarandi for their work, their ideas, and their patience. Most importantly, I want to thank the adolescents who participated in this study. Their enthusiasm and openness continually reminded me of the significance of working with tomorrow's adults.

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Abstract of Dissertation Presented to the Graduate School  
of the University of Florida in Partial Fulfillment of the  
Requirements for the Degree of Doctorate of Philosophy

ADOLESCENT MOTHERHOOD: THE HUMAN AGENCY PERSPECTIVE

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August, 1992

Chairperson: Marjorie White  
Major Department: Nursing

The purpose of this study was to develop and test a causal model a priori. The mediating influence of self-esteem in the relationship among the sociocultural variables of race, social status and family relationships, perception of motherhood, and pregnancy in adolescent females was examined. The Human Agency Model of Behavior developed by the researcher was used as a framework to explore interactions between the variables. In this model, the individual is shown as a self agent in determining behavior.

A convenience sample of 164 primigravida adolescents in their last trimester of pregnancy was obtained; a comparison group of 193 never-pregnant adolescent females was also selected. A retrospective design was used to investigate the research problem.

Ordinary least squares analytic techniques were used to determine the path coefficients for each pair of variable relationships in the causal model. Statistical significance was achieved for most of the relationships indicating support for the model as constructed. The following hypotheses were supported: (1) as social status increases, positive perceptions of motherhood decrease for adolescent females, (2) adolescent females of lower social status have higher incidence of pregnancy, (3) adolescent pregnancy occurs more frequently in nonwhite than in white females, (4) there is a more positive perception of motherhood in non-white than in white adolescent females, (5) self-esteem increases as bonding with the mother increases for adolescent females, and (6) adolescent pregnancy increases as perception of mother increases.

The path analysis demonstrated that the association between race and adolescent pregnancy is explained largely by relationships expressed in the model. Also, the model has significant explanatory power concerning the relationship between social status and adolescent pregnancy. Hypotheses concerning specific dimensions of bonding and the other research variables were not supported; the direction of relationships between were not as predicted. Hypotheses concerning self-esteem and adolescent pregnancy as well as perception of motherhood also could not be supported because the direction of the relationships.

## CHAPTER I INTRODUCTION

The behavioral characteristics of adolescent girls who become mothers, their socioeconomic status, as well as their social relationships have been studied from a variety of perspectives in recent years. Yet, research to date has not adequately explained either the growing phenomenon of adolescent parenting in white populations or the continually high rate in the nonwhite population, particularly among blacks. There remains a paucity of research exploring the interactions between variables known to be related to adolescent motherhood. Most lacking is a comprehensive explanatory model of the phenomenon.

Adolescent childbearing presents challenging health and social issues for health care professionals, educators and others concerned with the needs of the young. Concerns center on the health and developmental outcomes for both the young mother and her infant as well as economic issues for this family dyad. In particular, when the mother is under the age of 16, both the infant and the mother have significantly higher health risks. For example, this population is at risk for low infant birth weight and subsequent neonatal death as well as long term health problems. Babies born to adolescent mothers are 40 times more likely to die in their first month of life than are infants born to adult mothers (Weiss, 1988).

In addition to health concerns, the educational potential, economic future and family relationships of the adolescent mother are endangered. In 1985, Southern adolescent females gave birth to approximately 83,500 infants with an estimated cost to public agencies of \$3.57 billion for medical and food assistance (Weiss, 1988).

The majority of teenage parents never receive a high school diploma. The younger the mother at childbirth, the lower her annual family income will be, with families in which the woman was a teenage parent accounting for approximately half of the cost of AFDC (Aid to Families with Dependent Children) nationally. Teen parents who marry are three times more likely to separate and divorce. (Florida Healthy Mothers, Healthy Babies Coalition, 1992, pp. 1-9)

Of particular concern are the findings that the incidence of early parenting is increasing most rapidly in the young and middle adolescent populations while the older adolescent rate of early parenting has remained approximately constant. For these reasons, nursing research in adolescent parenting remains a priority.

Nurses are in contact with adolescents in a variety of settings such as school health clinics and family planning clinics in addition to the traditional contact settings. Through these contacts nurses should be able to identify those with the highest probability for early parenting as well as to intervene for prevention. But, the nurse's practice is limited by the lack of a comprehensive model for understanding the phenomenon of early parenting. Professional practice is limited by the absence of substantial research.

Nursing literature is particularly devoid of related works, aside from writings that continue to verify characteristics of adolescent mothers.

#### Purpose

The purpose of this study was to develop and test a causal model a priori which explains adolescent motherhood through relationships between selected variables in the sociocultural environment (race, social status and family relationships) and early motherhood perceptions as mediated by self-esteem.

#### Research Question

The following research question was explored: Is there a causal relationship between selected sociocultural variables, self-esteem, perceptions of motherhood, and pregnancy in adolescent females?

#### Literary and Operational Definitions of Terms

The sociocultural environment is the totality of external influences unique to the individual, including societal and family transactional characteristics. The societal context of participating adolescents was examined through assessment of the variables of race and social status. Social status was specifically examined using the Hollingshead Four Factor Index of Social Status (Hollingshead, 1975). This self report instrument used occupation, education, sex and marital status as factors that determined status in society.

Family transactional characteristics were assessed with the Parental Bonding Instrument (PBI) of Parker, Tupling and Brown (1979). The PBI

examines two dimensions; care and involvement, as well as control and overprotection are explored as continua. This instrument was particularly appropriate for the present research project since it examines the parent's contribution to the parent-child relationship from the child's perspective.

Self-esteem represents personal introspectives, the theory of who one is in a particular environment. As a measure of these self regard feelings, self-esteem was examined using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This 10-item self report measure explores the adolescent's global positive and negative attitudes toward the self.

Perception of motherhood is the conceptualization of, valuing of, and life plans for self functioning as a mother. The motherhood trajectory of adolescent subjects was examined using the Parenting Perceptions Instrument developed by the researcher (Dormire, 1989). The self report instrument explored the adolescent's positive and negative images of motherhood in general.

Adolescent females were defined as women between the their twelfth and nineteenth birthdays. Eligible participants were screened by interview as well as available records.

### Assumptions

Assumptions in this research are as follows:

1. Humans live in a symbolic environment.
2. The environment and the individual are in continual interaction.
3. Symbols are important in understanding human behavior.

4. Adolescents strive to develop the self in the symbolic environment.

5. Parenting is a valued role.

6. The role of mother is symbolic of adulthood.

#### Human Agency Model of Behavior

The Human Agency Model of Behavior (Dormire, 1989) was developed by the researcher to represent theoretical relationships between variables, identified in both literature and clinical practice, influencing adolescent motherhood. The model is one of continual, mutually influencing interaction between the individual and multiple environmental variables. Specifically, the focus is the dynamic influence of the environmental context on the individual's development of a unique, valuable self. The psychosocial constructs of the model are presented in the conceptual map, Figure 1-1.

#### The Self

The Human Agency Model of Behavior (Dormire, 1989), developed to represent individual uniqueness in social dimensions, indicates that the self is a theory directing individual behavior. In the model, the self is conceptualized as the self agent, a perceiving, experiencing being able to make choices and control individual destiny (Kohut, 1971; Rogers, 1959). Such an agent represents the association between a unique physiological, physical, intellectual, and emotional being with a unique environment. This unique environment influences all aspects of self expression, rational or nonrational. Perception of agency is the individual's belief in the



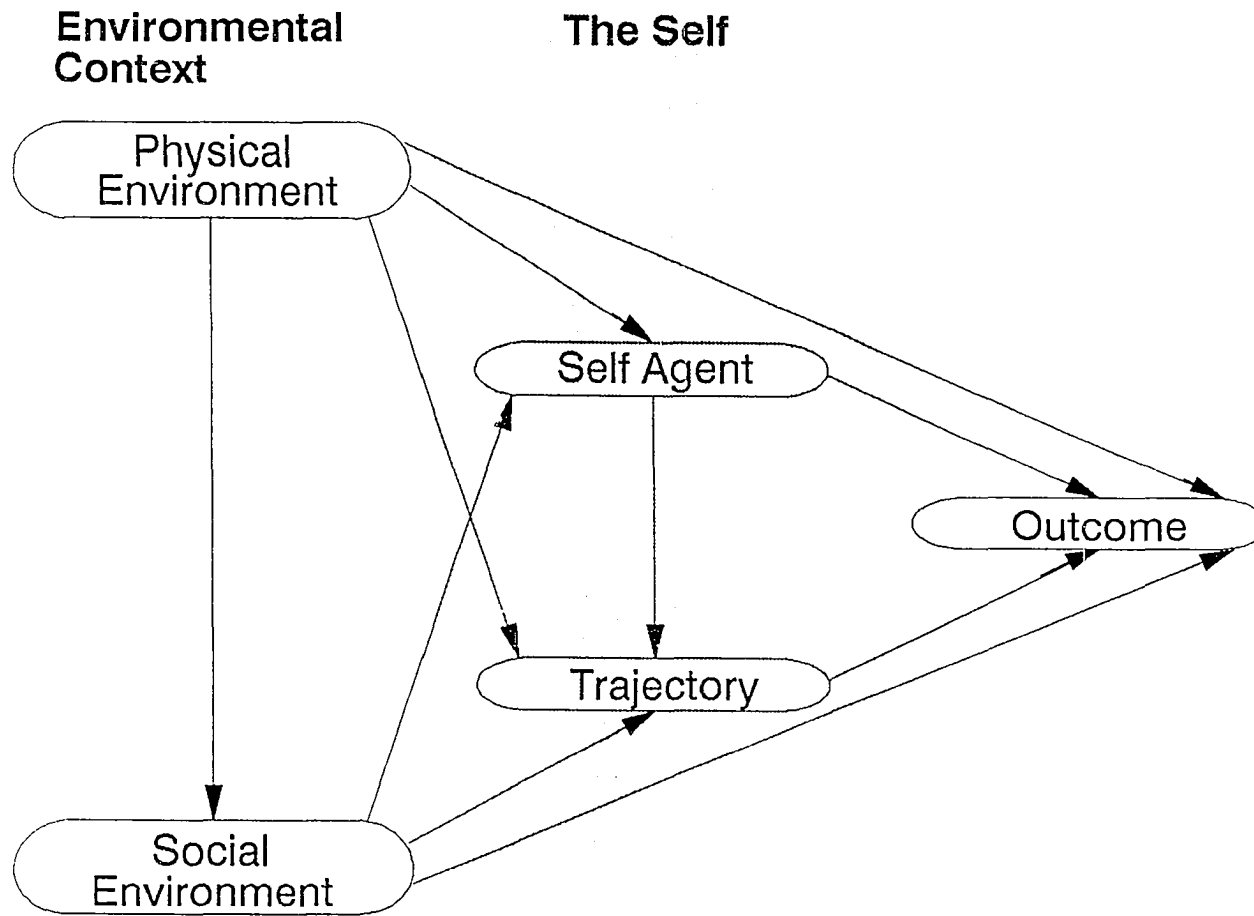


Figure 1-1

Human Agency Model of Behavior

ability to act as an agent for the self. Through the individual's perception of agency others can come to understand the environment-self relationship for this person.

Agency has two dimensions: the perception of self as actor (agent) and reactor (contingent) in the environmental context. Self is defined through the totality of positive and negative perceptions the individual has in the unique environmental context. One is a self agent who is able to act according to free will. However, one is contingent when action is merely reaction to the constraints of the environment.

The self as an agent is the individual's self theory. Each individual constructs a self theory (Kelley, 1955) which serves to organize in a personal way the information available about the individual and the individual's world in order to predict and control personal behavior. Accordingly, selected stimuli in the environment are given a personal meaning in terms of the theory of the self, and are regulated or controlled along with the behaviors. As such the self theory represents the person's grand schema.

Perceived agency is represented by a continuum with the self as actor and as reactor at opposite poles. At the positive pole, agency is characterized by the individual's perceived ability to create and change both self and interactions thereby influencing the environmental context. Perceived agency has two dimensions which are significant for the model: personal perception of agency and the looking-glass perception of agency.

Personally perceived self-agency is the individual's perception of internal and external resources available for movement toward individual goals. Through all of one's life experience, the self categorizes strengths and weaknesses of the internal resources and refers to these categories for future reference. This "catalog" of resources is built over time from cumulative life experience; it is dynamic in nature and open to change.

The looking-glass perception (Cooley, 1964) of agency is the aspect of the self theory as perceived from contextual environmental responses to individual in action. Aspects of the self are continually revealed to the environment through the mutual person-environment relationship. The person is evaluated as a part of the total environment from these disclosures. Other individuals in the contextual environment reveal their perception of the self via symbolic communication processes, verbal and nonverbal. Like the internal perception of agency, the looking-glass perception is dynamic or fluid; it is continually revised.

In the negative pole of the continuum is found perceived contingency, the belief of structural restriction. Such restriction is the individual perception of barriers to purely agentic action, that is, the individual perceives barriers for self action. As with perceived agency, perceived contingency is two dimensional: self-contingency perception and looking glass perception of contingency. When the individual perceives himself/herself to have low value intrinsic and/or extrinsic characteristics actions are modified; agentic actions for the interests of the self are adapted

to reflect the limitations imposed by the negatively perceived characteristics. In expressing self, the individual challenges the view of self as an actor and reactor in the given environment. Environmental limitations or restrictions for the self may be reinforced by perceptions of negative intrinsic and or extrinsic self characteristics.

Fluctuations along the perception of agency and perception of contingency continuum are ongoing. Through introspection, the individual gradually creates and recreates a definition of self. The introspection serves to review and evaluate both internal and external stimuli in determining present self. The self is defined as a result of valuing and examining both looking-glass reflections and personal perceptions. Therefore, it is formed through cumulative reinforcing experiences of interaction with the environment. It is the ongoing way in which the individual identifies self in relation to the total environment, the "I am" aspect of self. The self, then, is always in the process of becoming. However, the relative balance of agency and contingency results in a moderately stable view of self as part of the environment.

### Environmental Context

Prior to defining the major categories of the environmental context, the significance of one's perception must be explicated. In the context of interaction, all that is perceived by the individual is symbolic. That is, meaning is ascribed as the individual constructs his or her reality. The individual then attends to and responds to contextual variables in the

environment according to their relative importance; it is implied that the relative importance of these contextual variables varies between individuals. In addition, through the reciprocal influences between individual and environment, the individual may alter or reconstruct perception of a specific contextual variable and its relationship to other variables.

The environmental context consists of two major components, physical and social aspects, each with various internal dimensions. All persons develop as a result of the influences of both factors. Both components are always present and ever influencing the individual; at no time in existence can one be isolated from them. Therefore, physical and social influences are significant variables to be explored in understanding human behavior.

The physical environment includes the physical and physiological aspects of the individual as well as the physical aspects of the immediate world. Clearly, the physical being of an individual is the immediate environment within which the self operates. Physical aspects of the individual are the initial presentation of self to the larger environment. Perceptions and evaluations of the physical self as well as of other selves in the environment influence the developing self both directly and indirectly.

The actual as well as perceived physical being also has an impact on definition of self. Actual physical characteristics directly influence how one is able to carry on life activities. An individual whose physical capabilities are intact is able to believe in diverse potentials for the self in various life

activities. Conversely, however, actual physical limitations such as paralysis, deafness, blindness, amputations and so on influence the way the individual can interact with the social environment and express the self. Therefore, both perceived characteristics and actualities in the physical being influence development of and expression of the self in each individual.

Social comparisons of physical characteristics provides information for individual self evaluation. This information allows an individual to consider self as a part of a larger society. In reality, no individual can develop without consideration for the immediate social environment; humans are social beings. For example, if light colored skin is valued in a particular society, the individual with dark skin will be directly influenced by that social value. One's very position in society or in social groups may be determined by such characteristics. How much and in what ways the individual is able to influence the environment or act as a unique self are strongly influenced by these physical characteristics as defined by, or valued in, the social environment.

Personal perceptions of one's physical being, unique from social perceptions, have a significant impact on definitions of the self. Personal beliefs concerning physical characteristics may even be more significant than social influences. Individual perceptions are considered appropriate when the self theory leads to the conclusion that one's physical being is socially unacceptable, even if objective observations do not support the interpretation.

But, an individual is more than a psychological and physical being. Physiological existence immediately impinges upon the self as well for it represents the essential regulation of life processes and forces. In order to have social life it is necessary for the individual to have cardio-vascular, respiratory, renal and hormonal forces controlling physiological processes. The nature of these physiological processes has a direct impact on development of the self by regulating the individual experience of self and environment. Obviously, self perceptions of competitive swimmers are different than those of persons who cannot walk a flight of stairs without becoming short of breath. Or, based on other physiological variables, an individual who cannot reproduce will see self differently than one who can have children.

One must view each of the physical and physiological variables as part of the total environment of the self. It is the total environment as well as the individual valuing of these variables that structures the forces influencing the developing self. An individual may be noted to have many objectively identifiable limitations but personal value systems and perceptions result in a self who is functional in that environment. However, the individual who perceives severe dysfunction even when none or few are objectively observed will develop a vastly different self, one that does not optimally function. Therefore, the critical aspect of the environment is that each variable is important in the context of the total environment and the individual structuring and valuing of their perceptions.

Logically, the environmental variables extend to all that is external to the individual being, the physical and social environments. If one defines self according to perceptions from interaction, then the physical environment with which and in which one interacts is indeed significant. For example, one who has resources available to work toward personal development and/or goals perceives self to be agentic, that is, an agent for the self, in that environment. However, an individual in an impoverished environment is less able to perceive potentiality and possibility for the self. Socially appropriate goals may be the desire but limited resources impede realization of those goals. Ultimately, self definition and person-environment interactions are influenced by these limitations upon the self. Obviously such interpretations are premised on socially defined values and goals. It is assumed that all individuals are influenced by the values of their society or by those of a significant cultural group in society. Therefore, the self and individual behavior result in part from the physical environment as well as the personal environment.

The social environmental context is the sum of individually unique, external influences. A basic assumption of the model is that humans live in a symbolic environment. The totality of the social environment is best conceived as a tapestry of interwoven symbols that are important to human behavior: social, family and interaction characteristics. Each tapestry is uniquely that of the individual. Through ongoing person-environment interaction, the self ascribes value to these multidimensional symbols; the



symbolic importance is relative to individual perception as well as to the uniqueness of the environment. Perceptions and value beliefs develop as a result of previous experiences and socially transmitted beliefs related to the symbol. Therefore, such evolving perception is subject to change. Either the perception of symbols or their assigned values may be altered through the mutual reciprocity between individual and environment.

### Trajectory

A trajectory is an individual's life plan or direction of action in selected areas according to preconceived desires for the self. It is based on the changing perceptions of self as well as dynamic evaluations of the alternatives available given the environmental context. Each individual forms a life plan or life course, a trajectory, based on how the self and the environment are defined. A trajectory is the future vision of self functioning in the environment. It is a path or course taken toward self interests; a path taken under the action of given forces. The philosophical underpinning of a trajectory is that each individual has a choice of how to live in the circumstances of his/her environment.

Trajectories are best conceptualized as dimensions of being, actual or potential, for an individual. The experience of life creates unique interactions between the person and the physical and social environments. Such interactions may be defined to be roles. For example, if an individual is a student, a politician, or a wife, there are specific social behaviors expected for the person. In return, the individual expects appropriate environmental

responses to his or her role performance. A trajectory, then, represents present and potential relationships between the individual and the environment for given roles. As a result, trajectories serve to direct the individual and the environment.

The developing life trajectory gives meaning and shape to life transitions or changes. Trajectories aid in the individual experience of the environment; they serve to provide a control mechanism for survival. In forming a trajectory, the individual finds a niche to survive--an equilibrium between self and environment. DeCharms (1968) noted the significance of such control mechanisms as:

Man's primary motivational propensity is to be effective in producing changes in his environment. Man strives to be a causal agent, to be the primary locus for causation for, or the origins of, his behavior; he strives for personal causation. (p. 260)

For instance, trajectories are formed for an individual's educational, career, and marriage goals. They serve to direct or motivate the action of the individual toward personal interests for the next moment given changes in self and environment. Individual energies are focused toward a specific trajectory according to the relative importance ascribed to it. Therefore, trajectories may be discovered in the plans, goals, hopes and aspirations of the individual at any moment in time.

Like the self theory, each trajectory is open to continual modification in a changing environmental context. Such modifications are gradual; life plans firmly imbedded in the character of the individual are the most

resistent to modification. Consequently, one can assume relative stability in life trajectories while they evolve. An individual must commit to a trajectory. As Roby (1960) notes, such commitment is merely the reduction of alternatives in accordance with the defined self. In addition, movement toward a trajectory goal is an affirmation process for the self. The agency beliefs of the person are affirmed in the individual environment.

It is recognized that there are multiple trajectories for any individual being. Since pregnancy is the significant distinguishing variable, only the parenting trajectory and related goals are significant in this research. As the outcome measure of interest, pregnancy represents movement in the motherhood trajectory.

### Outcomes

Outcomes are consequences or results an individual discovers through movement in a life trajectory. Because they are based on the totality of self, outcomes are unique to the individual. They reflect the temporal context and the impacts of transition in a trajectory. Self-realization and personal fulfillment are two positive hallmarks of trajectory realization. For example, successful participation in a sporting competition following years of practice and preparation is indeed a positive outcome. Yet, negative outcomes can and will be experienced by every individual seeking to grow and develop in a chosen life trajectory. The sports enthusiast experiences a negative outcome when an injury is incurred in practice. As with the perception of

agency and of contingency, however, the meaning and significance of any outcome is defined by the individual.

#### Theoretical Formulations: Hypothesized Relationships

A causal model of adolescent parenting was derived (see Figure 1-2) from the Human Agency Model of Behavior (Dormire, 1989). The causal modeling approach was chosen as a heuristic device since the technique fosters the understanding of relationships between variables; in the present research causal modeling aids exploration of the relationships between variables commonly identified as significant in adolescent motherhood. The conclusion is based on inferences from patterns observed in the data as well as on assumptions made about the relationships among variables (Asher, 1987). However, the relationship is not directly demonstrated but is proposed to exist only under a restrictive set of conditions determined by the researcher. A non-recursive model was developed to illustrate the stated relationships between the critical variables in adolescent motherhood.

Each of the constructs of the Human Agency Model of Behavior (Dormire, 1989) was conceptually represented in the causal model. The physical environment is represented by the individual's race while social status and bonding with mother are concepts representing the social environment at both cultural and family levels. Further, self-esteem is conceptualized to represent a reflective measure of the self agent. A crucial measure in this model is the conceptualization of perceptions of motherhood as a measure of a life trajectory. Pregnancy is the outcome measure of

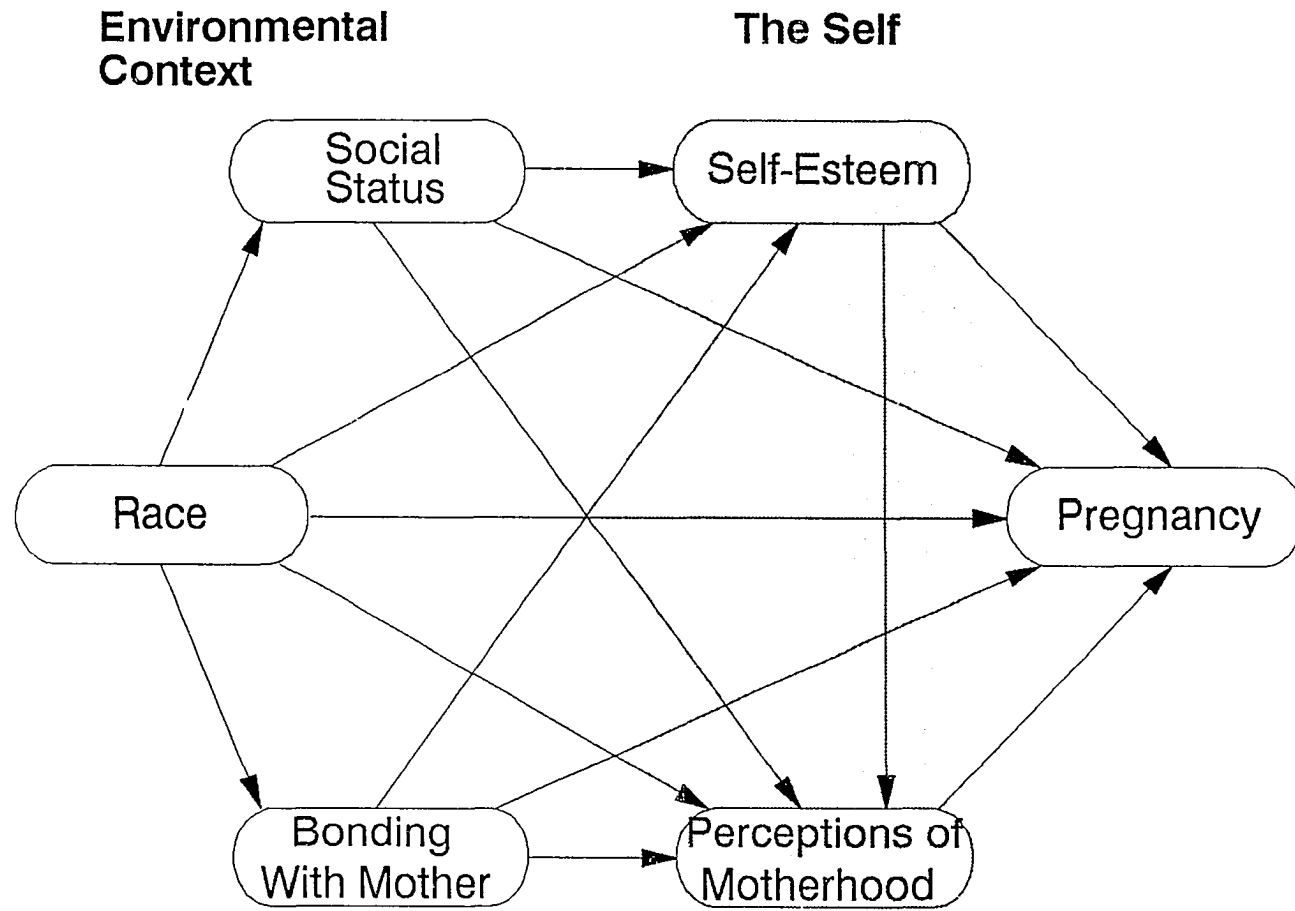


Figure 1-2

Causal Model of Adolescent Motherhood

interest in this study. Relationships among these concepts of the model are defined below.

### Life Trajectories and Endogenous Variables

The function of a life trajectory is to give purpose in living.

Trajectories serve to help an individual find a niche to survive, to develop an equilibrium between the self and the given environment. Becoming a mother is hypothesized to be a goal for the adolescent population of interest.

Although unwanted and unanticipated pregnancies may occur, pregnant adolescents should differ significantly from never-pregnant adolescents on certain critical variables according to the model. Within similar cultural environments, it is anticipated that the pregnant group will express a higher value of the motherhood role while the never-pregnant group will not value adolescent motherhood. These individual differences are rooted in varying levels of commitment to the trajectory, which Roby (1960) referred to as the simple reduction of alternatives. The individual makes decisions for optimal fit between self and environment.

The significance of motherhood to women and adolescents must be explicated. Mothering is a valued female role in American society. Society has long proposed the mothering role to be an appropriate life choice for adult females. While it is not without its costs, in exchange theory terms, the cultural belief is that it maximizes reward for the woman; it validates her as socially important through producing new members of the society.

Given that motherhood is a valued role in society, it represents a socially significant life trajectory for women. An individual may perceive self development or fulfillment in such a socially valued role as that of "mother". In particular, adolescents with a paucity of life options may choose motherhood as their route to fulfillment. Through these model relationships it is hypothesized that adolescents who have poor self agency perceptions and who live in environments that do not nurture them perceive motherhood to be the most direct and plausible route to adult stature with all of its rights and privileges. Becoming a mother serves to foster self perceptions, self-esteem in particular for specific adolescent populations.

#### Self Perceptions and Endogenous Variables

Self-esteem is derived from the totality of positive and negative self perceptions in the unique environmental context. The agentic self is characterized by the perceived ability to create and change either person or person-environment interactions. The contingent self is found in perceptions of structural restrictions to self action. The sources of such contingency are born in self-criticism or in perceived limitations in the external environment. When the individual perceives himself/herself to have low value, agentic actions for self interests are adapted to reflect the limitations imposed by contingent perceptions.

Behavior is predicated upon such self evaluations. Given similar situations, behavior differences will be noted for individuals with varying

levels of self-esteem. The behavior of high self-esteem individuals will reflect an agentic relationship between self and environment; individual potential will be maximized. Conversely, low self-esteem individuals will focus internally and examine behavior based on the environment. The individual always seeks to maximize the rewards and potentials. To enhance one's self-esteem in the given environmental context is a behavioral motivator. Therefore, the individual makes choices for the self that will provide the greatest rewards given the personal and social environment.

For an adolescent who perceives herself to have limited life options in the given environment, early motherhood can, from her perspective, serve to project her into a socially valued adult role. The adolescent who becomes a mother, with all of its intrinsic and extrinsic rewards, enhances her self concept and subsequently her self-esteem.

#### Sociocultural Variables and Endogenous Variables

In the causal model of adolescent motherhood (Dormire, 1989), individual social characteristics (cultural group and social status) and family dynamics (specifically bonding with mother) are conceptualized to represent significant environmental influences in the adolescent's struggle with perceived agency and perceived contingency. These variables structure the relationship between self and environment. They influence the meaning of self-agency and self-contingency for the adolescent. Ultimately, the structuring of such information has an impact on the adolescent's self perceptions (self esteem) and direct life goals.



In the causal model, racial characteristics are related to perception of agency-contingency. Specifically, it is adolescent females from nonwhite racial groups who will perceive less self agency as a consequence of their membership in the less dominant race. In an environment where a specific individual or her social group are not a part of the dominant society, the conditions exist for the individual and her related group to perceive themselves as limited. For such an individual, unique self expressions are inhibited and behavior is contingent upon the environment. It is possible for these limitations to be so strong that the individual does not even consider or attempt to develop the agentic aspects of her self perceptions; apartheid conditions in South Africa are an extreme example of such individual limitation. The outcome of such structurally restraining situations is theoretically reflected in the self concept of the individual.

It is important to understand, however, that it is the sum of these various inputs as they give contextual meaning to the individual experience that is most significant. Variety and complexity of perceived characteristics (individual and environmental) as well as the individual interpretation provide the matrix of variables that influence development of the self. For example, a characteristic that the society at large believes to be a significant social obstacle may not be so perceived by the individual. That individual may at the same time have other personal and environmental resources which provide the supports necessary for a rewarding life that enriches both the person and those around him/her.

In the greater social environment, social status is hypothesized to be related to self-esteem. Specifically, it is hypothesized that individuals with higher social status will have higher self esteem than individuals with lower social status. Each individual receives information concerning self in social context from an ascribed social status. Adolescents, as a group, are keenly aware of the status for themselves and others around them. The hierarchy of students from "popular" to "unpopular" is well understood by all adolescents. This knowledge of the relationship of self to others provides informational inputs to aid defining self.

From this research perspective, it is hypothesized that the higher the social status, the greater the agency perspective for any individual. The converse is also true; the lower the social status, the greater the contingency perspective of the individual. Since it is hypothesized that race is related to one's relative location on the agency-contingency continuum, two significant hypotheses emerge from the social environment domain. Social status is hypothesized to be positively related to self-esteem in adolescent females. Also, adolescent females who are members of racial minorities will evidence lower self-esteem than will adolescents who are part of a racial majority.

Specifically in the adolescent's immediate environment, limiting family situations, e.g., poor family bonding, result in limited development of the agentic self. Lacking in family support to foster her self theory, the individual perceives more contingency within the environment than she

perceives agency. These perceptions are then reflected in a poor self evaluation, a limited self-esteem. Therefore, the hypothesis derived from this model is that bonding with mother is positively related to self-esteem.

#### Relationship to Theory for Nursing Science

The Human Agency Model of Behavior is primarily a process model. It focuses on change as a universal in human life via the linkage of macro and micro processes. Human development is not viewed to have an end-point; it is a continual process of mutual influence of environment and self.

Assumptions of the model reject an equilibrium view of life found in most nursing models. Most models used to date assume linearity and equilibrium that place conceptual focus on the level of the dependent variable rather than rates of change in the dependent variable. Methodology and analytic approaches which deal with change over time are significant for nursing in an emerging phase of professional growth. Therefore, one pertinent contribution of the model is a broadening of perspective away from static models toward change models; a limitation of the study itself is that the data are cross-sectional.

The individual is perceived as an agent for self. This model, then, gives more power to individual experience. Each has potential and choice in the environmental context to pursue specified life plans. The Human Agency Model of Behavior, therefore, moves the prevailing paradigm of a universal ideal for life (generally middle-class success options) to one of individual choice in interaction with the environment. For nursing, the model

directs professional practice to aid healthy actions of the individual in achieving life goals given their environmental context. A logical deduction is that methods to promote perception of agency for all persons, adolescents in this particular research project, would become imperative.

Finally, the Human Agency Model of Behavior is intended to alter the general perception of absolute deviance in adolescent parenting. The prevailing models present the adolescent with limiting perceptions for self and newborn. However, in changing the model to one of perception of developmental opportunity, the health care delivery approach necessarily changes to one of support for the young mother as well as for those most reporting early parenting trajectories. When the phenomenon is understood comprehensively, specific approaches may be developed to prevent physical and social harm by supporting restructuring of the environment for those at high risk for early parenting.

## CHAPTER II LITERATURE REVIEW

The variables of interest in this study of adolescent motherhood represent individual, familial, and societal levels of measurement using a multivariate ecological model. The intent of this approach is to foster understanding of relationships between the various levels of variables. Since the Human Agency Model of Behavior (Dormire, 1989) involves variables at various levels, the framework used by Bronfenbrenner (1977) serves to foster discussion of the significant relationships of concern in adolescent motherhood.

Bronfenbrenner (1977) conceptualized ecological space as operating on different levels of systems, each operating within the next much like nested structures. His model illustrated interactions between characteristics of people and their environments with the critical events occurring in their interaction. Using this model as an organizational framework for the literature facilitates a discussion of causal factors that may operate interactively or independently in adolescent motherhood. Causal factors at each level, individual, familial, and societal, will be described and the research literature that supports the causal factors at that level will be discussed.

### Sociocultural Level Variables

The focus of the sociocultural analyses is the major societal institutions, cultural values and belief systems that influence both the individual and the family operating in the social environment. Social characteristics repeatedly associated with early motherhood are lower socioeconomic status and racial minority. Of specific concern is who among those with the above characteristics is most likely to become an adolescent mother? What distinguishes that individual from others in their population? Can it be established that these individuals differ in their attitudes and beliefs from the socially accepted norms, or are the differences a pattern of cultural values? Do these patterns only emerge under specific cultural constraints? The description of cultural variables that follows may aid in clarifying these issues.

With the family as the unit of analysis, Lewis (1966) believed that he could capture unique relationship between individuals and their culture, as represented by the family. Lewis observed that societies economically based on capitalism are organized by stratification. Within such stratification Lewis found what he defined as a culture of poverty, a family pattern passed down from generation to generation.

The culture of poverty is defined by several recurring and consistent characteristics. Few in the culture of poverty marry, for example. Childhood is not endeared as a significant or prolonged stage of development. Adult roles, such as motherhood, are assumed early with the

approval of the family unit. The psychological consequences are various. Lewis stated that "the individual who grows up in this culture has a strong feeling of fatalism, helplessness, dependence and inferiority" (p. 23). As a result those in the culture of poverty have a present-time orientation and lack the ability to delay gratification or to plan for the future.

Lewis observed that the culture of poverty has an adaptive function-- that of coping with the complex society. Lewis believed that not all individuals who are poor live in the culture of poverty; several preconditions and traits must exist in order for this sub-culture to survive in a society:

The setting is a cash economy, with wage labor and production for profit and with a persistently high rate of unemployment and underemployment, at low wages, for unskilled labor. . . . There is a bilateral kinship system centered on the nuclear progenitive family, as distinguished from the unilateral extended kinship system of lineage and clan. The dominant class asserts a set of values that prizes wealth and property, stresses the possibility of upward mobility and explains low economic status as the result of individual personal inadequacy and inferiority. (p. 21)

When these conditions exist, as they do in the dominant American culture, the culture of poverty develops.

Lewis further described specific cultural traits in stratified societies. First, he found that the poor are not integrated into the major institutions of the society, for example the political system lacks representation by their members. Subsequently, the poor harbor a hostility for the dominant institutions such as government agencies. Still, they remain largely unorganized in their own community beyond that which exists in the family.

Secondly, individuals in the poverty culture contribute to the society in a menial way and receive little in return for their efforts; the economics of the society perpetuate the culture. However, the poor are aware of middle class values and may even verbally acknowledge these values. Yet, they do not live by the espoused values because they cannot or perceive that they cannot structure their environment to meet and live by these values.

Lewis' research indicates that it is necessary to understand social context as a critical feature that influences individual choice and behavior. Therefore, social status of pregnant adolescents will be the first major variable examined in the review of the literature. Several significant studies provide evidence for social status as an explanatory variable for attitudes about pregnancy as well as future vision.

#### Social Status

In a 1987 study Alvarez, Burrows, Zvaighat and Muzzo compared the sociocultural characteristics of pregnant adolescents with non-pregnant adolescents in Chile; all of the participants were of low socioeconomic status. Pregnant adolescents were found to be predominately present oriented with a limited future vision. In contrast, the non-pregnant participants envisioned a promising future with a good chance of attaining her career aspirations through continued education. These findings provide some support for Lewis' proposition that those ingrained in the culture of poverty live in the present. However, cause and effect cannot be inferred. The Alvarez et al. study does not clarify if the lack of future orientation and



low level of aspiration in the pregnant subjects is a precondition of the pregnancy or is a result of it. In addition, there is not a comparison with middle and upper strata of adolescents to examine the phenomenon as related to social class.

Hill (1984) surveyed middle and lower class black adolescents to compare differences according to social status in sexual attitudes, sexual knowledge and behavior. Differences were found in dating behavior, contraceptive use, age at first coitus, and attitude toward pregnancy. Lower social status students had more positive attitudes concerning pregnancy, with more negative attitudes toward abstinence, the use of contraceptives and abortion. While Hill's study clearly identifies that the existing differences were related to social status as opposed to mere differences between the races, it does not provide an explanation for the findings. In addition, it is not readily apparent how social status contributes to development of such behaviors and attitudes.

Shtarkshall (1987) assessed how the characteristics of females from low socioeconomic groups have an impact on the future vision of individuals. The sample of participants was drawn from the enrollment of a program in Israel aimed at promoting social and educational advancement of the low socioeconomic status adolescents. Data were gathered by having the participants project themselves one and three years into the future and describe their perceived roles at those times. What the researcher found was that the participants in this training program continued to perceive their

future to be centered around mothering, even though they were being given the opportunity for individual career development.

The findings of this research are intriguing given that the lower social strata are overwhelmingly represented in the early motherhood population. But, we are limited from drawing conclusions concerning the adolescent population at large for the lack of comparison of adolescents from other social strata to compare the life goals. An assumption of Shtarkshall's research is that adolescents of lower socioeconomic status are at higher risk for early motherhood based on their "promiscuity and having little recourse to contraception" (Shtarkshall, 1987, p. 566). Such an assumption, particularly in the absence of a comparison group, leaves the research open for criticism; promiscuity should not be assumed in any population. Also, adolescents of younger age groups were not examined to explore the possibility that the development of life ambitions may have been solidified by the age of eighteen while younger adolescents may benefit more from an intervention program. Finally, there was no follow-up report of the sample to determine the outcomes of their training and life changes for a three year period after completion of the program.

Since social status has been demonstrated to be a significant variable in the incidence of early motherhood, some have come to question whether or not the system of public welfare assistance has in and of itself contributed to the problem of adolescent pregnancy in the poor segment of the population. Placek and Hendershot (1974) sought to examine that

question in their study of a sample of welfare recipients in Tennessee. These researchers were interested in examining the prevalent "Brood Sow" myth which they particularly noted in the 1960s and early 1970s in various public official's statements. According to this myth, the welfare mothers (1) believe they are better off being on welfare, (2) are extremely sexually active, and (3) refrain from using contraceptives and become pregnant in the hopes of increasing their welfare allocations.

Placek and Hendershot conducted standardized interviews with 300 welfare mothers in their home. Interviews focused on the interval between each of the woman's pregnancies and on the woman's perception of her economic status on welfare. The data analysis did not reveal drastic support for the "Brood Sow" myth. In fact, the majority of welfare recipients did not receive welfare benefits following the birth of their first child. When eventually using welfare services, they did not continue these services in subsequent childbearing. The "Brood Sow" myth was rejected after finding that women had a greater likelihood of using contraception while on welfare. Subjects in this sample ranged from 15 to 44 years of age with a mean of 27.5 years. While the study does not directly have implication for the adolescent population, it does aid in clarifying the role socioeconomic status does or does not play in early motherhood. Placek and Hendershot offer no support for the notion that lower socioeconomic adolescents become mothers in order to foster the economic position of the family through public assistance.

In his longitudinal study of adolescent mothers in the Baltimore area, Furstenberg (1976) also did not find support for welfare as a major influence on the life events of these families. He followed 400 adolescent mothers, their partners, parents and children based in a health care facility. Structured interviews were conducted at various points in the six year period. At the five year follow-up interview, the participants were asked about the money they had received during the past year and the source of such money. The first ranking source for the group was self support from working. Welfare came in as a second most identified source with husband's income in a close third. It is clear that welfare is not a major influence on the life choices of the population when one considers that sixty percent of the participants were either working mothers or were nonworking partners married to a wage-earning male.

However, Kantner, and Zelnik (1972) did find socioeconomic status to be a significant variable in the sexual experience of adolescent women. Using data from a national probability sample of 4,240 young women aged 15 to 19, the researchers observed that the higher the socioeconomic status the lower the proportional sexual experience of age groups. Differences in social status did not consistently remain when the data were analyzed according to race, however. An inverse relationship between social status and sexual experience held consistently only for the black subjects. The relationship did not hold for education of the parent and sexual experience of the subject in the white participants. The socioeconomic variables analyzed

in this study (family income, poverty status and parent education) had only a slight effect on the proportion of whites with sexual experience in the sample.

Kantner and Zelnik (1972) next attempted to analyze these differences in sexual experience through standardized multivariate comparisons between blacks and whites. Such analysis revealed that racial differences in intercourse experience persisted and could not be reduced to differences in socioeconomic circumstances. Although this was a significant finding, the nature of the research could not offer an understanding of the root of racial difference. Researchers contended that the answer to the issue would be found in a sociological explanation.

In summary, the body of available research indicates that the cognitive perspectives of adolescent sexuality and pregnancy are related to social status. Researchers have found that females in the lower socioeconomic groups focus on the present rather than strive toward the future. These same females have positive attitudes concerning early sexuality and may center their lives around mothering. Therefore, the first hypotheses of the present study are:

Hypothesis 1: As social status increases, positive perceptions of motherhood decrease for adolescent females.

Hypothesis 2: Adolescent females of lower social status have a higher incidence of pregnancy.

Yet, economic motivations have not been found to be the bases of childbearing. Researchers observed that women did not believe having children would improve their financial status through public assistance. However, race has been demonstrated to be a significant variable in the relationship between socioeconomic status and sexuality. Therefore, an adequate picture of the social environment is not complete. The race variable must also be explored.

### Race

Several authors of the above studies indicate that race is among the significant variables in adolescent motherhood. Indeed, it may appear that race and social status are confounded factors. The issue that must be clarified, however, is in what ways race can contribute to premature childbearing.

First, a basic assumption must be identified. Just as stratification based on socioeconomic variables was accepted above, stratification based on race is assumed to exist in American society as well. A long history of discrimination can be readily identified. Although many great strides have been made toward resolution of such atrocities, the continuing struggle for racial equality is testament to the remaining stratification.

Understanding adolescent motherhood from this perspective is enhanced by first interpreting the meaning of motherhood in American culture. Mothering is a valued role in American society. It is viewed with near reverence, at least from the emotional perspective. Our society has

long proposed the mothering role to be a significant life option for females. While it is not without its costs, in exchange theory terms, the cultural belief is that it maximizes reward for the woman; it validates her as socially important in producing new members of the society. Individual women as mothers have a collective identity as well as a value.

If it is the case that females in oppressed groups have a limited option field for personal development, and mothering is a socially valuable role, then mothering would have a different pattern for subordinate groups than for those who are not in such groups. Becoming a mother would not only serve to continue the group, it would aid the individual woman to secure a socially valuable identity as an adult member of society.

Research in the area of early motherhood supports this proposition. One issue is that black adolescents are more sexually active than are white adolescents. Obviously sexual activity is a necessary forerunner of pregnancy. While, the percent is not actually increasing, adolescent blacks have been found to be 40% more likely to be sexually active than white adolescents (Zelnik & Kantner, 1980). Furthermore, race has been consistently found to be related to early childbearing (Marsiglio & Mott, 1986; and Walters, Walters and McKenry, 1987); specifically, being a black American adolescent is associated with the incidence of early motherhood. Therefore, the next hypothesis is:

Hypothesis 3: Adolescent pregnancy occurs more frequently in non-white than in white females.

While conducting a study of the impact of a sex education course on sexual activity, contraceptive use, and premarital pregnancy, Marsiglio and Mott (1986) also noted the influence of race on adolescent pregnancy. In fact, of all the variables tested, their data demonstrated that being black had the strongest positive effect on adolescent motherhood. Given that the data are from a national representative sample of 6,015 women and 6,054 men, the findings should be considered strong evidence for the impact of race on the phenomenon of early motherhood.

Results from another study further supported the role of race in the issue. Walters, Walters, and McKenry (1987) distributed questionnaires to 1,196 high school students in the state of Georgia. Of the sample, fifty-seven were self-identified as currently or previously pregnant. The questionnaires of these subjects were matched with a second subgroup by age. Two random samples were drawn from the remaining questionnaires, one group of 349 subjects and the other of 404 subjects. These two random samples were used to cross-validate findings as representative of the general population of adolescents.

Study participants each completed questionnaires concerning their purpose-in-life as well as perceived locus of control. The analyses of data revealed that enthusiasm was the best discriminator when the subjects were grouped by race; white subjects scored higher than did black subjects. Also, despair was the most efficient descriptor when subjects were grouped



according to socioeconomic status; low socioeconomic subjects scored highest on despair.

Interestingly, no dimension of purpose in life or locus of control appeared to be a solely adequate descriptor of the pregnant or the never-pregnant groups. Again, only race and socioeconomic status met the criteria as descriptors. Race was a better descriptor of the pregnant subjects with more girls who had ever been pregnant being black (80%) while only 53% of the never-pregnant subjects were black. In addition, the socioeconomic status of the never-pregnant subjects was higher than that of the pregnant girls.

In this study it was found that race and socioeconomic status were the best descriptors of the pregnant and never-pregnant adolescents, neither factor appeared to be a good predictor. In fact, Walters, Walters and McKenry (1987) indicated that using race and socioeconomic status to predict adolescent pregnancy, they would be correct in the prediction 68% of the time for the never-pregnant subjects and 63% of the time with the pregnant subjects. Neither race nor socioeconomic status alone or in combination provide adequate explanation of the adolescent motherhood phenomenon. However, since early motherhood is associated with these two characteristics, further information about the connections of these variables with other significant findings must be made.

None of these researchers attempted to explain the influence of racial and social characteristics on adolescent motherhood. Such relationships are

only beginning to be explored. One of the early works toward that goal was done by Rainwater (1970). Enlisting the aid of eight field workers, Rainwater used repeated, intense interviews with families in an inner city federal housing ghetto over a three year period. Field workers facilitated their own acceptance in the community by developing close relationships with only a small number of families.

One portion of Rainwater's analysis centered on the phenomenon of adolescent sexuality and motherhood. Once sexually experienced, the adolescent would consider herself desirably mature. The hallmarks of change in her behavior could be found in the increased demands for economic benefits she made of her boyfriend, the movement to be more autonomous from her family, and the increase in criticism she had for any parental control. Her personal perceptions were to some degree validated by her community; the sexually experienced female was considered socially mature and was so regarded by others around her. As a result, Rainwater noted that the adolescent female in the ghetto has much to gain by her peers and community when she publicizes the evidence of her maturity from participation in sexual relations.

While sexual experience offered the adolescents in this study gains in maturity perceptions by themselves and their community, the most blatant marker of transition to adulthood could be found in the birth of the girl's first child. Based on the belief that only mature women bear children, the demonstrated capacity to reproduce clearly moved the adolescent into

womanhood. The data in Rainwater's study indicated that pregnancy in mid-adolescence is so common that this particular manner of making a transition to adulthood by ghetto females is accepted and taken for granted.

Perhaps the most significant study of the relationship between race, social status, and adolescent motherhood was reported by Dash (1989). Spurred by an interest in the problem of early motherhood, Dash chose to conduct field research in a Washington, D.C. housing project. His ethnographic methodology led him to live in the subjects' community for seventeen months. Through extensive and repeated interviews, Dash reviewed the life and family histories of six families to understand the multifaceted variables affecting adolescent pregnancy in the black population.

Of particular importance for the method of survey research in this area, was his finding that the participants gave him the "party line" when asked about their early pregnancies. In the early stages of his interviews adolescents reported that they had not intended to become pregnant, it was purely an accident, or they had been used by their partners. However, he found that following approximately six months of interviews, the true story began to emerge for each--the pregnancies had been intended for various reasons.

Through his work, Dash came to realize that the adolescents in these conditions of poverty believed that it was necessary to have a child in order

to become an adult. Poverty and social alienation were the dominant features of their lives.

In Washington Highlands, one of the many black-adolescent symptoms of alienation from the mainstream America is having a child, a rejection of the larger society's value system regarding what is rational and irrational behavior. The patterns of childbearing were laid down long before the children of Washington Highlands were born. The patterns are viewed by many of them as rational responses to human needs, requirements that cannot be met by other means. (p. 31-32)

What Dash saw in his analysis was a pattern of early childbearing that began in slavery and sharecropping times of black history. Children were then necessary assets for their contributions to farm production. As a result their childhood was brief; adult roles started early. For example, early sexual intercourse was expected. He detailed the story of one adolescent female who had not had intercourse at the age of 14. She was the object of ridicule by her peers. Eventually she did become pregnant at the age of 16 to prove her womanhood; she delighted in her success at proving fertility.

In most cases, children born to adolescent females were not labeled negatively nor were they discouraged. Such children were valuable assets. They signified additional labor for the farm responsibilities. While this specific utility for children no longer remains, particularly in the urban sites Dash studied, the pattern of adolescent childbearing remains. He concluded that the pattern continues because of problems of low self-esteem in the poor black population. The negative behavior he observed was the result of people's inability to earn an income. The adolescents he met perceived only

limited economic futures for themselves; this observation held true even for the most educationally promising of the participants. Having a child provided the individual with a tangible achievement for themselves.

The Dash (1989) and Rainwater (1970) studies offer interesting insights into the individual's perspectives about motherhood as they relate to social characteristics. In essence, they are portraying that individual beliefs about life circumstances and resources result in life outcomes. This provides the basis of the next research hypothesis:

Hypothesis 4: There is a more positive perception of motherhood in nonwhite than in white adolescent females.

What is lacking, however, is an analysis of how or why the patterns established generations ago continue in different social situations. How such social characteristics influence the early motherhood of other races is not addressed either. Even more importantly, these works do not relate in any way to similar perspectives found in other races and social structures. Both works were completed at inner city ghetto sites and were limited to black families. What is necessary is a broadening of the perspective to encompass the transactions between social, family and individual characteristics related to the phenomenon.

#### Family Level Variables

A review of dynamics aids in focusing the picture of adolescent parenthood. The variable of interest in the family context of the social environment is the bonding with the adolescent's mother. Specifically, two

dimensions of bonding for the research include quality of mother-daughter relationship and communication patterns.

#### Communication Dynamics

Family structure alone provides little clarity in the issue of early motherhood. Adolescent motherhood is found in homes with two parents as well as in one parent homes. How the family unit functions in relation to each family member is perhaps a more significant variable in the issue than is its mere structure. Therefore, family communication patterns must also be examined as an issue of concern.

Miller, McCoy, Olson, and Wallace (1986) surveyed high school students aged 14 to 19 over a two year period. The purpose of this research was to examine the relationship between discipline or parental control and adolescent sexual attitudes as well as behavior. Parents of the participants were mailed a related survey questionnaire as well. Only data for which information was available from both the adolescent and their parent were used for analysis. The final sample size was 2,423 sampling units with 63% of the subjects female and 76% of the subjects white. Of interest were the adolescent's perception of strictness in discipline and control attempts of their parents, as well as the number of rules the parents had for dating. Both parents and adolescents were asked the same information in order to provide some measure of validity.

The results of the study indicated a curvilinear relationship between parental strictness and adolescent sexual behavior. Specifically, adolescent

perception of the parent being very strict and having many rules was associated with permissiveness in attitudes and sexual behavior in the adolescent. However, the greatest permissiveness and sexual experience was associated with a perceived lack of rules and strictness in the parent. Therefore, the extremes of communication relationships between the adolescent female and her parents were most strongly associated with early motherhood.

Why, though, does such an association exist in the extremes of communication dynamics in parent-adolescent relationships? Research described below indicates a potential answer in that one positive outcome for adolescents may be a facilitating effect on parent-adolescent communication, particularly with the mother, when a pregnancy occurs.

Towsend and Worobey (1987) hypothesized that "greater attachment, more intimacy, and a stronger feeling of closeness would be perceived by both mothers and daughters where there was not or had not been a teenage pregnancy" (p. 488). Female high school students and their mothers in an urban setting provided the sample for this study ( $n = 95$ ); a subsample of 19 subjects who had been or currently were pregnant was identified. Both mothers and fathers reported on questions concerning issues of intimacy, attachment, and strength of feeling as well as demographic characteristics. The researchers noted that ratings of both mothers and daughters were overwhelmingly positive toward each other. The data seemed to indicate

that the reality of pregnancy actually facilitated mother-daughter communication.

Streetman (1987) examined the relationship of self-esteem to adolescent motherhood. A sample of 93 unmarried females in a state sponsored training program participated in the research survey. Of this sample, 75% had at least one child at the time of their participation in the study. The battery of questionnaires used for data collection included an alienation scale to examine social isolation, normlessness, and powerlessness. Correlations between the subscales of the alienation questionnaire indicated that a change in social interaction is one consequence of early motherhood. Streetman's data demonstrated that having a child brings the adolescent closer to her own mother with the interrelations possibly occurring on a more adult basis. Specifically, the change in status of the adolescent brings her into a network of support and affiliation as a consequence of her pregnancy.

Horn and Rudolph (1987) studied communication patterns between adolescent females and their parents related to early motherhood. These researchers sampled 23 adolescent mothers aged 13 to 19 during their postpartum hospital stay. Data analysis indicated adolescent mothers felt good about relationships with their mothers. What is not clear from this study, however, is if the reported quality of the relationship with the mother is different than it was prior to pregnancy; it is not clear if a better



relationship with the mother results from the adolescent pregnancy and adaptation to it, or if it was a preexisting relationship.

### Relational Qualities

Closely related to the issue of communication is the quality of the parent-adolescent relationship. While few of the studies that have examined the parent-adolescent relationship have employed broadly generalizable samples, researchers have repeatedly noted similar relational characteristics in various sample populations. Such findings foster consideration of the issue at hand.

LaBarre (1968) reported the results of a pilot study involving ten married, white adolescent mothers interviewed during their prenatal and early postnatal periods. The social characteristic of the sample was that of lower socioeconomic strata. The interviews focused on the life situation and dynamic forces that influenced their adjustment to motherhood.

The interviews revealed that the adolescent mothers had been responsible for younger siblings since their own early childhood. The subjects were very proud of having had such responsibilities. It may be rather telling to the issue at hand that none of the subjects had used any type of birth control method even though they were sexually active; sexual relations were common and accepted in their peer groups.

LaBarre noted a major influence in the prenatal adjustment of the adolescent mothers was the baby shower. This cultural ritual had major

significance to the materially deprived teens. It enhanced their sense of status and role as women.

Several of the girls described wistfully and appreciatively how their mothers did more for them during the pregnancy than any time before. Some described a change in their relationship with their mothers from that of mother/child to a kind of peer relationship of two women engrossed in the pregnancy experience. (p. 50)

LaBarre concluded that many of the adolescents grew individually as a result of their motherhood experience; they evidenced their abilities at adapting to the situations in which they find themselves. At the same time the subjects seemed unaware of the serious personal and social problems in their future and that of their offspring. They appeared to be caught in the "culture of poverty" noted in the lives of their own mothers.

Babikian and Goldman (1971) studied fifteen adolescents females under the age of seventeen beginning at approximately twenty weeks of gestation. The subjects were participants in a prenatal group that met for twenty sessions during the last half of pregnancy. A control group of fifteen adolescents receiving care at the clinic but not attending the prenatal group was used to evaluate the therapy results. Outcome data were collected in a one-hour long psychiatric interview.

Significant factors noted were that in only six of the total sample of thirty adolescents had come from intact families. Also, as noted in the LaBarre (1968) study above, most of the adolescents were among the older of the siblings in their families; they had carried a heavy responsibility for

house chores as well as raising their younger siblings. The researchers reported the subjects often stated that they were tired of cleaning a mess after others and wanted a family of their own.

The relationship with the mother of the adolescent appeared to be the most significant to adolescent motherhood. Most reported rigid rules set for socialization. The households were characterized as frequently escalating into severe fights. However, Babikian, and Goldman (1971) found that the same girls who reported violent arguments also expressed intense wishes to be closer to their mothers. It was found that the pregnancy had served as a vehicle to achieve this sought after closeness. Subjects believed that their mother's attitudes had changed toward them; they found that their mothers paid more attention to the adolescent's needs and were perceived to take care of them. The psychological data revealed that the adolescents strongly identified with their mothers. The subjects reported being just like their mothers because an adolescent pregnancy had happened to them as well. These authors indicated that two of the major psychological issues around adolescent motherhood were: (1) dependency versus separation and individuation from the adolescent's own mother, and (2) unresolved oedipal conflicts with the father and his absence. The adolescent pregnancy served to resolve these issues for the adolescent as she moved on in a new adult role.

Poole, Smith, and Hoffman (1982) further researched the relationship with the adolescent's mother. These researchers interviewed forty-four

mothers of adolescent mothers to examine the attitudes and relationships concerning their daughters as perceived by these grandmothers. A majority of the study population was black, 52%, while 37% was white with 11% categorized as other. The socioeconomic characteristics of the sample were evenly split between middle, low-middle, and low social categories.

Researchers found that most mothers felt closer to their daughters at the time of the interview than they had before the baby was born. Some stated that they now receive more respect from their daughters through the experience of motherhood. These grandmothers believed that their daughters now realized the amount of effort required to raise a child. They perceived that efforts in pregnancy, delivery and raising the child had created a special bond between them and their daughter; some expressed their wish that such closeness had developed earlier in their relationships. In this study it was found that the change in relational quality due to the adolescent motherhood, was perceived as positive for both the adolescent and her own mother.

Olson and Worobey (1984) examined the differences in mother-daughter relationships in pregnant and non-pregnant adolescents. Data were gathered through questionnaires distributed to twenty pregnant and forty nonpregnant adolescents volunteers. The pregnant sample was recruited from an alternative education program for pregnant adolescents; the non-pregnant adolescents were sampled from family-life classes at three

secondary schools in the same school district. Respondents were matched on demographic variables.

Analysis of the data revealed a significant difference between the groups concerning their relationships with their mothers. In particular, the pregnant adolescents perceived less affection, disclosure, and fewer demands from their mothers. They also perceived, however, more rejection and casual rule-setting in the relationship. These researchers concluded that the quality of the mother-child relationship is a critical variable in the incidence in adolescent motherhood. They further qualify their findings by stating that strong parent-child relationships actually insulate against premature motherhood.

The research related to each dimension of the bonding with the mother as well as the formulations of the causal model indicate several hypotheses:

Hypothesis 5: Self-esteem increases as bonding with the mother increases for adolescent females.

Hypothesis 6: As bonding with the mother increases, perceptions of pregnancy become less positive for adolescent females.

Hypothesis 7: Adolescent pregnancy decreases as bonding with mother increases.

As with the social factors, characteristics of families as they communicate and relate to one another do not provide a sufficient answer to why certain individuals experience adolescent motherhood. Possessing one

or more of the social or family characteristics discussed above will not adequately predict the adolescent at greatest risk for early motherhood. The focus must be turned toward the individual. What characteristics identify the girl who will eventually experience premature motherhood? How do all of the various levels of factors interact? How can their relationship be interpreted?

### Individual Level Variables

#### The Self

Some researchers posit that adolescents who become pregnant are aware of their restricted circumstances and prospects, and have made a conscious fertility decision with respect to their limited options. Several studies that support this hypothesis are examined here.

Auletta, a writer/reporter, completed an extensive participant observation work in 1982, The underclass. The major focus of the work was as an analysis of extreme poverty and factors influencing it. The findings indicated that feminization is the most significant variable in poverty. Auletta's exploration of such feminization of poverty indicated that adolescent childbearing in the populations he encountered was one major factor in the perpetuating these conditions of poverty. In this field analysis, Auletta followed 26 trainees attending a work program center over a six month period. The training program selected for the study was chosen because of its intent to provide long-term welfare recipients, ex-convicts, ex-drug addicts, and delinquent youths with job counseling and training as well

as securing a job. Data for the analysis were gathered by the researcher attending all of the training classes as well as conducting repeated one-to-one interviews with trainees.

As the field work turned toward the impact of early motherhood, Auletta focused on why teens living in poverty with few means of support would not be more diligent in preventing early motherhood. From his middle-class viewpoint, Auletta centered his concern on the economic issues that childbearing brings to one's life. The data gathered from the subjects in the training program, however, did not indicate support for his concerns. Rather, the trainees explained that having children is a life goal in itself; motherhood provides individual status to the individual when few other options are available. A child gives something the woman can have for herself when she cannot have or hope to achieve in personal, professional, or economic domains.

Most surprising to Auletta, though was finding the cultural belief among the subjects that if a woman reached the age of eighteen without having a baby, she was not a woman. A childless eighteen-year-old was not accorded the rights and responsibilities of adult status. Motherhood, in this culture, was the one path to maturity of the adolescent female.

In their longitudinal study, Jessor and Jessor (1975) noted transition to non-virginity proneness attitudes that prevail in adolescents. This sample consisted of 432 high school students who were followed over a four year period. The participants were largely Anglo-American in background and

were representative of the middle-class socio-economically. Each participant completed an extensive questionnaire yearly to examine personality, perceived environment, and behavior.

The nonvirgins placed a lower value on achievement and had lower personal expectations for achievement. Other data that supported their perceptions were noted in their behavior could be observed in the finding of actual lower school achievement in the nonvirgin subjects. The interesting and significant finding in the research is that valuing and expecting less achievement existed in those virgins who became sexually experienced in the subsequent year as well as in the nonvirgins. Some person-environment interactions supported the development of a personal belief in restricted circumstances for social achievement.

From the social environmental perspective, the literature indicates that the factors most significantly affecting adolescent motherhood are race and social status. Those factors must be examined from the perspective of the individual in order to explore the influence of these variables on one's perspectives of prospects for the future.

Udry, Bauman, and Morris (1975) interviewed 100 black and 100 white females between the ages of 15 and 44 from low-income neighborhoods in 16 selected cities in the United States. Their data supported previous research findings that there are differences in sexual experience according to race for females; the youngest age cohorts find



significantly higher numbers of black females who are sexually experienced than white females.

Furthermore, women with the lowest levels of education demonstrated the highest rates of sexual involvement. Interestingly, the pattern related to education was consistent between the races. However, even within the various educational levels, the black percentages of sexual experience were found to be more than double that of the white females.

One finding in this research that does not appear to support the life options theory of sexual experience is that the differences in occupational status between the races did not contribute in any meaningful way to the different patterns of the races. Race in and of itself appears to be a powerful variable in the incidence of sexual experience. From the perspective of the Human Agency Model of Behavior, the influence of race in the Udry, Bauman, and Morris research indicates the significant impact one's race has on individual life options perspectives.

In her ethnographic work with urban black adolescents, Ladner (1971) also noted one's prospects for the future as having an impact on early motherhood. She found that the community studied accepted having a baby as a tangible symbol of womanhood. In fact, Ladner concluded that having a child was the one circumstance that most often allowed the adolescent female entry into womanhood.

Ladner did note that most of the subjects and their families gave lip service to having the middle class life of material possessions and resources.

But, most realized at some level that such successes were not in their futures. Since other more middle class perspectives for becoming an adult were out of reach for the population of the urban poor, other routes to adult status were accepted in the community. In this population, adult stature was equivalent to motherhood.

Hanson, Myers, and Ginsburg (1987) also contributed to the understanding of perspective for the individual and the family. They used a multistage stratified cluster sample to examine the relationship between responsibility and knowledge in reducing adolescent pregnancy. Eighteen females were randomly selected from each grade level in 1,100 schools sampled for the research. Initial data were collected and one year follow-up contacts were made.

Interestingly, the findings indicated that knowledge had no effect on whether or not an adolescent female experiences premature motherhood. The most significant variable in this study was family and individual values concerning the future of the adolescent. When the adolescent and the parents were perceived to stress responsibility, the chances of adolescent motherhood were significantly decreased. In addition, adolescent females with high expectations for themselves were much less likely to have a baby.

Indirect support for the proposition that one's perspectives for the future affect the incidence of adolescent motherhood is provided in the work of Yamaguchi and Kandel (1987). These researchers studied life events, particularly drug use, as they related to premarital pregnancy. They

interviewed 706 women with an average age of 24.3 years in a follow-up survey from high school. The interviews consisted of mostly structured items that aided in reconstructing the women's life history and drug history.

These researchers found that several variables could be identified as increasing the likelihood of adolescent pregnancy. Those factors were noted to be: being black, having had poor grades and high peer activity in high school, use of illicit drugs and being a high school drop out all increase two to three times the risk of early motherhood.

Each of the above studies lends support to the hypothesis that one's total personal, family, and social environment influence life options. Under the conditions indicated by these analyses motherhood is a reasonable route to adult status and maturity for adolescents. The link weaving together each level of variable remains to be explored, however.

#### Forming Trajectories

Considered analysis of the impact of race and social status reveals that the conditions of one's existence alone cannot predetermine one's life and life experiences. Other links between social and individual variables must exist. At the social level the individual's interpretation of social opportunity in their given social conditions appears to merit consideration as the key link between race, social status and individual behavior.

In their scholarly analysis of the problem of adolescent pregnancy, Edelman and Pittman (1986) clearly direct attention to the issue of social opportunity as a direct antecedent to early motherhood. The major premise

of their writing is that socially disadvantaged adolescents--economically, educationally, or racially--simply lack compelling reasons to delay childbearing. The authors point out that eighty-five percent of black single mothers under the age of 25 live in poverty. They question why the birth rate is then so high for this population. Edelman and Pittman believe that the answer lies in the lack of an alternative future for these women. Their position is supported through the statistics concerning the differences between black and white adolescents in similar situations.

More than one-third of the black 14 to 17 year olds in the U.S. are one or more grades behind in school or not in school at all compared to one quarter of all white students. Forty-six percent of black 16 to 19 year olds are unemployed, three times the white youth unemployment rate. College enrollment among black high school graduates had fallen off precipitously since 1977 while rates for white graduates have remained stable....Most dramatically, recent labor force statistics show that even college degrees fail to guarantee economic security for young blacks. Black college graduates have about the same chance of being employed as white high school dropouts.  
(p. 67)

Edelman and Pittman then propose that there is little to discourage early parenthood in a society where one's worth is primarily judged on work, school and family. When pregnancy does occur in this population, dreams for economic or scholarly success are not shattered; such dreams did not realistically exit in the beginning. Adolescent motherhood meets dreams for success on the personal and family level when social dreams could not be met; the social opportunity never actually existed in these situations.

In a theoretical analysis of black family ideology and structural conditions of the society, Staples (1985) cites the explanation of Hortense Canady, President of Delta Sigma Theta Sorority for the choices of black women to have children without the "benefit" of marriage. Canady is quoted as believing that:

Having a baby is probably the best thing that's ever going to happen to them in their whole lifetime and the only thing they can contribute - this is not true in most other countries in the world. But if you belong to a class or group of people who have no educational opportunities stretching out before them, no other goals, that's probably the single, best thing that's ever going to happen to you in your life. (p. 1009)

Staples questions the wisdom of marriage for a black female given the economic opportunities for a black male as her partner. He proposes that the black male does not have the ability to fulfill the responsibilities of husband and father in the social environment. The social structure--economic and political--limits realization of aspirations for a traditional family life.

In an ethnographic study of rural black adolescents and their families, Dougherty (1978) found that females were given adult status by their family and friends when they had successfully endured the processes of pregnancy and childbirth. Data were collected for this study over a two year period using the participant observer methodology. As she became part of the community through her participation in it, Dougherty was able to identify the various ways in which adult status is affirmed for these adolescents.

She noted that there are three subphases in the adolescents passage to adulthood in the culture. The girls must proceed through pregnancy,

childbirth and finally to accepting their roles as mothers before they are considered adults. Womanly status is conferred when the girl becomes the primary caregiver and nurturer for her own infant. The phase preceding movement toward adulthood is one of an indefinite status. In this phase, the adolescent does not quite have a specific role for her social circle. "The resolution to indefinite status eventually is found in pregnancy....pregnancy and childbirth and the acceptance of motherhood serve to alter girls' social relations and admit them to womanly status" (p. 87). In other words, the socially prescribed route to adulthood in these rural environments is found in giving birth; in making her passage, the adolescent contributes both to society and the descent group the valuable gift of a new life.

While the study does not directly address the social opportunity, the findings do contribute to understanding of the phenomenon. Subjects in her study were part of the culture of poverty, passing traditions down through generations. Individuals were born and raised in the circumscribed area then found themselves beginning the next generation in the same environment. Few made successful efforts to change their situations toward more mainstream values. It appeared that such changes were not made because they were not desired, rather they were not made because of blocks to their advancement. The structure of social opportunity limited the impact of success.

The Walters, Walters, and McKenry (1987) study also implied a relationship between social opportunity perceptions and adolescent

motherhood. The socioeconomic status of the never-pregnant participants was found to be higher than that of the pregnant participants. In addition, the descriptor that was most significant for the low socioeconomic group was that of despair.

Since the pregnant subjects were most likely to be found in the lower socioeconomic strata and this group was best characterized by the despair descriptor, there is an indication that the girls in this stratum do not perceive social opportunity; their higher incidence of early motherhood may be a reflection of such personal beliefs. Because despair was found to be characteristic of the lower socioeconomic group irrespective of pregnancy, we may conclude that such despair is related to the social status rather than the motherhood status of individuals in that group. However, since the authors did not directly explore individual perceptions of their situation, nor did their work offer any theoretical explanation for the relationship between perception of status and outcome behavior, specific conclusions cannot be drawn without further research and explanation.

In creating a trajectory, the individual structures values to reflect the perceived opportunities in the social environment. For premature motherhood, important values are attitudes toward fertility. Research has indicated that low-income black adolescents value fertility more highly than do whites. The findings of Ladner (1971) concerning black adolescents shed light on the implications of valuing fertility. Individuals in the urban poor environment did not find premarital sex as an immoral act. The

community and subsequently the individual accept sex as a natural human function. Therefore, few restrictions were noted to be placed on individuals in the community.

Ladner noted that one probable rationale for such a view of premarital sexuality was the value of children in the community. Children were regarded as very valuable to the family as they provided the link to the future. This value of children was found to be so strong that female value rested in the ability to give birth. The community in general perceived that there is something in particular about the childbearing experience that grants and enhances the maturity of the women. The age of the female at the time she gives birth is relatively unimportant; her ability to give life to another and her experience of childbirth have scripted her to maturity.

The Stack (1974) study previously described focused on the adaptive strategies of those who live under conditions of perpetual poverty. Stacks's research was centrally concerned with the kinship networks in the population of interest. As a consequence, she was able to examine the significance of various relationships in the family and community.

What Stack noted about family in the poor population of her work was that families take pride in all their kin, new babies in particular. The addition of new family members assures that the household will be maintained. As a result childbearing is a natural and highly desirable activity. The girl who brings a new baby into the home is valued because



she has contributed to the survival of the family unit. Therefore, she will be rewarded through immersion in a kinship network of support.

Thompson (1980) compared black and white adolescents concerning their beliefs, perceptions and decisions about having children. The sample consisted of 150 black and 150 white adolescents attending suburban senior high schools. A thirty five item inventory using a Likert format was used to assess the domains of interest. Data were analyzed using a principal components factor analysis with race and sex as dichotomous variables.

The results indicated that black adolescents held more favorable beliefs about having children. This subsample of adolescents believed that one's having children enhances marital success as well as personal security. Thompson's results indicated that having children is a desirable thing to do in the black population. Both the black males and the black females in the sample were more strongly committed to two significant factors than were either sex of the white subjects. The two items were:

The most intimate and satisfying of interpersonal relations between a man and a woman is defined by the conception of a child.

And,

The father who is able to announce the birth of his child is the proudest of men. Almost nothing exceeds this pleasure.

Thompson concluded the valuing of the black subjects noted by items indicated that having a child is a more significant event for the black

adolescents than it is for the white adolescents. What is lacking, however, is an indication of how the adolescents value childbearing in their adolescence as opposed to projecting themselves into adulthood.

#### Individual Interpretation: The Key Relationship

The linkage between these factors must be found in individual perception of the multifaceted relationships between the social, family and individual variables in adolescent motherhood. How the person sees herself in the given environment as an individual and as a part of the social world gives structure to her world. She then functions in her world according to her self theory of person and environment. The meaning she ascribes to each of the above discussed variables is the key to understanding adolescent motherhood. The final section of the literature review will focus on describing the relationships between these variables according to individual interpretation.

Unique physical, psychological, developmental, social and intellectual characteristics of adolescents from various social groups creates flux in adolescent self perception. In addition, the individual's environment, social and personal, is the link between the individual and the social world which influences variation in self perception. The major premise presented in this section is that the individual adolescent female develops her self perceptions in interaction with the personal and social environments. How the individual interprets the meaning of these perceptions determines how she feels about herself in general.

Self-esteem is a general reflection of how the adolescent interprets the self in the given environmental situation. Characteristic self-esteem can be chosen to serve as a barometer of the relationship between environment and self. This variable will aid in understanding how the societal, familial, and individual described above are interpreted by the individual to eventually impact the adolescent motherhood. The operational premise is that social, family and individual limitations are interpreted by the adolescent female to indicate that she, as a unique person, had limited strength and value to meet the broadly held conceptions of adult stature and success. More precisely, adolescent girls with low levels of self-esteem, related to individual development and/or societal restrictions, choose to parent when confronted with a premature pregnancy in an attempt to maximize personal rewards.

Self-esteem is an appraisal of overall self-concept by the individual (Erikson, 1963). One may describe it as the feeling component of self-evaluation. It is the result of one's daily review of identity: "what do I like and dislike about the person I see myself to be today?" Since identity develops over time, the core of self-esteem also develops gradually. But, it may fluctuate according to a variety of factors, including the social situation at a given time. Therefore, self-esteem is neither an invariant characteristic of the individual nor a freely changing one. It is more appropriate to conceptualize self-esteem as a solid core with fluid boundaries.

One who has adequately developed self-esteem feels worthy of the respect of others. She can feel secure in actions, interactions and

judgments because she accepts the person she sees herself to be. She is able to direct her interactions with others from an internalized belief set, even while it continues to develop. As a result, she can make choices for herself, including those regarding sexuality. She can also accept responsibility for those actions. Such behavior is seen in mature adolescents, particularly those of the older age groups.

An individual with a poorly developed core of self-esteem has an inner lack of trust in self. This person believes she is not loved; lacks power, significance and value; lacks physical, intellectual, emotional or social abilities; or has incongruence between her beliefs and behavior. Defense mechanisms must be mobilized to protect the esteem which does exist. Often, this inner lack of trust in the self is manifested in group conformity (Erikson, 1963). Such behavior is the hallmark of adolescents as they mature toward a secure identity. Clearly, both solid and weak cores of self-esteem can be identified in adolescent behaviors at various developmental stages. Through observation as well as in theory, a relationship between adolescent development and self-esteem can be illustrated.

Adolescence is a period of development in all spheres of human growth. It is a period of immense change which disrupts the individual's self-concept. The rapid changes in body, thinking, and interpersonal relations contribute to altered self-perceptions and self-evaluations. In the completion of adolescent developmental tasks, the person integrates these changes into a mature self. It must be noted that the issue is one of

individual psychosocial maturity rather than chronological age, even though the two may be related. Therefore, the experience of adolescence is one of the individual striving to define the self. According to Erikson (1950), this task is *achieving identity*. This requires integration of previous social identifications to form a unique being, to develop a sense of inner oneness.

During this process, the adolescent must shift her attachment and dependence from parents to peers. In doing so, an important intermediate step occurs: she temporarily directs her love and attention onto herself. This is seen as a transient normal stage of self-love. The relationship with peers serves to reflect and clarify the perceptions she has about this exciting new individual, unsure of her as she is. These inner shifts in allegiances cause her turmoil. As a result, the adolescent female has difficulty regulating her self-esteem.

Furthermore, Piaget (1969) described the cognitive changes of adolescence as shifting from concrete to formal operations. The movement from one cognitive style to another alters perceptions of the world as well as beliefs about a relationship to it. Concrete operations are characterized by *unqualified reliance upon objective reality as a basis for intellectual reasoning*. The adolescent's thoughts are fundamentally centered on individual experience of the world. In concrete operations, then, the adolescent has difficulty perceiving the future or options in it. Adolescents at this stage believe they have a limited range of choices.

In contrast, when formal operations have been achieved, one is able to think abstractly and reason deductively. Piaget (1969) refers to this as the "final fundamental decentering" of the individual. The adolescent is able to realistically see the self as a unique individual who is part of a family, a community, and a society. Coleman (1972) further characterized the concept of formal operations as obtaining the ability to perceive the self in the span of time, an individual with a future. The adolescent must see the self as a person of value with future options in order to conceptualize the future and a personal part in it. Therefore, the level of cognitive development directly influences the individual's perception of self, particularly in consideration of life options.

Thibaut and Kelley (1959) developed the concept of rewards as the pleasures or gratifying aspects of relationships. Nye further expanded the concept to include all that is gratifying to an individual; such pleasures he does not limit to interaction alone. His concept adds a dimension of option for "all things physical, social, and psychological that an individual would choose in the absence of added costs" (Nye, 1982, p. 14). Indeed, then, a positive appraisal of the self is a desirable goal in appraising choice outcomes. The desire to promote one's self-esteem may logically be a motivation for specific choices and actions.

Researchers have found that a searching for affection is frequently found in sexually active teens. For instance, Cobliner (1974) found that the reasons girls sought the company of a boy were: (1) peer group pressure,

they feared social isolation if they resisted, (2) genuine longing for intimacy to compensate for loneliness, and (3) looking for someone to confide in, wanting someone to be a friend. For the adolescent who is not sure of who she is in the world, sexual activity can aid to validate her importance. Other researchers have also found pregnant girls to also fit into this category of individuals with low levels of self-esteem. Abernathy (1974) found that few, if any, friends is a significant variable, as did Martin (1973) in a post-abortion sample of adolescents.

Reiss (1986) discussed the universal importance of sex because of its "social binding power". It brings to the individuals in the relationship both physical pleasure and self disclosure. While the benefits of pleasure are obvious, it is the self disclosure element that most directly relates to early adolescent sexuality. Reiss describes self disclosure as revealing intimate aspects of the self to others. Another person's acceptance of the disclosure affirms the individual as significant. Given the psychosocial development stages of adolescence previously discussed, identity and self-esteem can be fostered through such intimate self revelation.

While a link between adolescent development and self-esteem has been shown, the influence of the social environment on self-esteem has not been described. As has been discussed, individuals define themselves through interaction with others. Since one's self-esteem develops as a function of such socialization, it would be influenced by the social environment. She, by definition, must see herself in the context in which

the society at large sees her. Forces that have an impact on one's identity must also affect self-esteem since it develops as a function of identity development. If the adolescent is seen as inferior to another group for reasons such as poverty or race, she eventually must come to see the limitations her group identity places on her personhood. Therefore, the degree of security in one's basic self-esteem would be related to the social group environment. Those in oppressed groups would then have difficulty developing self-esteem fully.

If it is the case that females in oppressed groups have a limited option field for personal development, and if we assume that mothering is a socially valuable female role, then mothering would have a different pattern for subordinate groups than for those who are not. Becoming a mother would not only serve to continue the group, it would aid the individual in securing a socially valuable identity and esteem as a member of that group. It is then hypothesized that:

Hypothesis 8: Race is related to self-esteem for adolescent females.

Hypothesis 9: Positive perception of motherhood decreases as self-esteem increases.

Research in the area of premature pregnancy supports that proposition. As a subculture, adolescent blacks have been found to be 40% more likely to be sexually active than white adolescents (Zelnik & Kantner, 1980). Indeed, the black race has consistently been found to relate to early childbearing (Brown, 1985; Marsiglio & Mott, 1986; Staples, 1985; Walters,



Walters, & McKenry, 1987). It appears that, in view of the subordinate status of black Americans, the parenting option can be a reasonable exchange in seeking personal value rewards in society as it is currently structured.

One is led to ask how race alone could so strongly influence the problem of premature parenting. Many examples of successful black individuals and families could be identified. For that reason alone, it is probable that other social disadvantages also influence one's life options negatively. It is reasonable that having few realistic choices and opportunities would limit the ways in which an individual can contribute to society. Again, parenting would be an appropriate social role in the absence of all others. Recent research has supported that this is happening in populations with high rates of early parenting. It has been shown that poverty, poor educational opportunities, and dropping out of school are significant variables in the incidence of adolescent parenting (Brown, 1985; Chilman, 1983; Marsiglio & Mott, 1986; Staples, 1985; Walters, Walters & McKenry, 1987).

But, where does that leave the consideration of high parenting rates in adolescent blacks. It has not negated the proposition at all. One must bear in mind that the black population is over represented in the poverty strata, as well as in groups with fewer educational and economic opportunities. If this proposition is true, then the research would support that the highest parenting rates are in poor, black, and ill educated groups. Which, as we

have seen, is the case. Hogan and Kitagawa (1985) concluded that it is the populations of teenage girls with the fewest life options and limited social opportunities who are most likely to experience a premature pregnancy.

Therefore, it is hypothesized that:

Hypothesis 10: Adolescent pregnancy decreases as self-esteem increases.

Conversely, Hanson, Myers, and Ginsburg (1987) report that both black and white adolescent females who believe they have control over their life circumstances and hold high educational expectations are less likely to experience childbirth. Nye (1982) places this behavior in the realm of choosing that which provides the greatest reward with the least cost. One must consider the realistic options for a successful college education or business career by an individual from a disadvantaged background.

Subordination of social groups cannot alone explain the incidence of premature childbearing for not every disadvantaged girl has an early pregnancy. What would explain the difference? It must be accounted for on the individual level in all social groups. Just as social stratification can account for variances in identity and esteem, an individual's social environment would relate to her identity and basic self-esteem development. For instance, an adolescent girl who perceives herself to live in a stressful home environment (disrupted family, poor family relationships, or poor family communication) would have difficulty differentiating herself as being a worthy person, someone deserving respect of others. For this young girl,

individually rewarding experiences would be the most plausible as a means of securing self-esteem.

Again, there have been researchers exploring the adolescent parenting phenomenon who have found personal disadvantage to be a significant factor in its incidence. In particular, it seems that the relationship with the mother is important. Girls who have disturbed interactions with their mothers, especially with a domineering mother, are frequently in the parenting population (Babikian & Goldman, 1971; LaBarre, 1968; Miller, McCoy, Olson, & Wallace, 1986; Olson & Worobey, 1984). Other researchers have identified general family problems among the variables influencing parenting choices in adolescents: little parental support, few parental controls or excess parental controls, poor communications in the family, and single parent homes (Freeman, Rickels, Mudd, & Huggins, 1984; Jessor & Jessor, 1975; Yamaguchi & Kandel, 1987).

An adolescent from a stressful social environment is confronted with internalizing self perceptions from available interactions; she is socialized to validate herself through a vision of who she is in that environment. Once again, the adolescent's cognitive development comes into play with the socialization. Seeing few options for developing an esteemed self, the adolescent views parenting as a socially confirming role, whether or not she recognizes such motivations. This perspective leads to the last hypothesis of this study:

Hypothesis 11: Adolescent pregnancy increases as perception of motherhood increases.

It is the purpose of the present research to examine if such an interplay of self perception links the commonly cited variables that have an impact on adolescent motherhood.

### CHAPTER III METHODOLOGY

A retrospective method was used to investigate the following research question: Is there a causal relationship between selected sociocultural variables, self-esteem, perceptions of motherhood, and pregnancy in adolescent females?

The hypotheses of this study were:

1. As social status increases, positive perceptions of motherhood decrease for adolescent females.
2. Adolescent females of lower social status have a higher incidence of pregnancy.
3. Adolescent pregnancy occurs more frequently in nonwhite than in white females.
4. There is a more positive perception of motherhood in nonwhite than in white adolescent females.
5. Self-esteem increases as bonding with the mother increases for adolescent females.
6. As bonding with mother increases, perceptions of pregnancy become less positive in adolescent females.
7. Adolescent pregnancy decreases as bonding with mother increases.
8. Race is related to self-esteem for adolescent females.

9. Positive perception of motherhood decreases a self-esteem increases for adolescent females.
10. Adolescent pregnancy decreases as self-esteem increases.
11. Adolescent pregnancy increases as perception of motherhood increases.

This project was conducted with groups of pregnant and never-pregnant adolescents. In order to capture sociocultural variance, subjects were selected from the public health units and public schools of six participating counties in the north central region of Florida. The differences in the characteristics and populations of these sites served to facilitate generalization of the findings and differences. The design was also proposed to provide for the needed larger sample sizes of both the pregnant and never-pregnant adolescents.

#### Human Subjects Protection

Prior to data collection, the proposal was approved by the Institutional Review Board for Human Subjects in Research. Permission for the study was then obtained from the Maternal Infant Care Project Medical Director for participation of adolescents in the six county health departments in the study and from the District Director of County Public Health Units. For the never-pregnant subjects, permission for conduct of the research was obtained from each county School Board.

Consent of all participating adolescents was obtained as a part of the research protocol and confidentiality for participation was assured. Also, written consent of a parent was obtained for never-pregnant adolescents before data collection; this consent was deemed necessary by the school districts where the subjects resided due to the sensitive nature of the research topic.

### Pilot Study

A pilot study was conducted by this researcher with a sample of 26 pregnant adolescents at an alternative education public school program. The purpose of the pilot study was to serve as an evaluation of specific instruments as measures of the research concepts: family relationships, the self concept, and the life trajectory.

Subjects were predominately black and were of lower social status. Three groups of students were first needed to compare and contrast various instruments representing each specified concept. Natural grouping of the students in a required health course required for that school served as the mechanism for determining group of participation. One and only one set of concept instruments were completed and evaluated by each group. Those in Group I evaluated instruments for the family relationship construct. Group II evaluated measures of the self concept. Group III responded to instruments measuring life plans. Evaluation information focused on the difficulty of completing the instrument and the time for completion. From these evaluations and from the data analysis of the instruments, the research instruments were selected.

A fourth group of 23 pregnant adolescents who had not participated in the original evaluations served to pilot the three selected concept measures. Information gathered from the pilot study included total time of instrument administration, determination of coefficient alpha and test-retest reliability.

For the Parental Bonding Instrument (Parker, Tupling, & Brown, 1979), the coefficient of precision was found to be  $\alpha = 0.98$  for this sample. This figure indicates that 98% of the variance in the test scores is explained by common factors underlying the item performance. Test-retest reliability was examined through re-administration of the PBI four weeks later. The correlation coefficient indicated a reliability of 0.76 ( $p = 0.02$ ). Interestingly, this reliability was equivalent to the test-retest reliability reported by Parker, Tupling, and Brown with their adult population (1979). Another analytic note from the pilot study was that the range of total scores fell between 19.0 and 50.0 with a standard deviation of 7.29. In addition, the pilot study indicated that the PBI provided sufficient distribution of responses for the adolescent sample representing adequate domain sampling. In a written evaluation of the instrument, each of the pilot subjects rated the instrument as clear and easy to understand. None of the subjects identified any words as difficult to comprehend. Therefore, the PBI was judged to be an appropriate measure of the parental relationship dimension of the environmental context.



Pilot study of the Rosenberg Self-Esteem Scale (Rosenberg, 1965) indicated that the instrument was easily understood by the adolescents. Participants were also able to complete the Rosenberg Scale in a timely fashion. Coefficient alpha was 0.90. In test-retest reliability assessment, the correlation coefficient indicated a reliability of 0.82 ( $p = 0.05$ ). From these data the researcher determined that the instrument provided appropriate information for the concept of interest to be examined in the causal model.

Written evaluation of the Parenting Perceptions Instrument (Dormire, 1989) indicated that no difficulties were identified by the pilot study participants. The coefficient of precision was  $\alpha = 0.88$  for this sample. This figure indicates that 88% of the variance in the test scores is explained by common factors. In addition, test-retest reliability over a four week period was found to be  $r = 0.7595$ ,  $p = 0.0026$ . These data indicate stability of responses for the instrument. For these reasons the researcher believed that the instrument would be a strong measure of the concept of perception of motherhood.

#### Population and Sample

This research was focused on the population of adolescent females between the ages of thirteen and eighteen in the North Central region of Florida. A convenience sample of 178 pregnant adolescents and 204 never-pregnant adolescents was selected over a seven month period to examine those relationships. Sample selection was designed to have participant

subjects represent the population at large. In that effort, the twelve counties in the Maternal-Infant Care Project (MIC) Florida Region III were ranked according to the percent of nonwhite population using information from Pregnancy Outcomes in Florida: 1983-1987 (Florida Healthy Mothers, Healthy Babies Coalition, 1988). The percent of nonwhite population variable was used as the critical population characteristic because of the incidence of adolescent motherhood in nonwhite populations. Selected characteristics of the counties from which participants were obtained are presented in Table 3-1. From the hierarchical list every two counties served as a pair. Beginning with the first pair in the hierarchy, a coin toss determined which of the two served as the data collection site.

The sample size needed to analyze hypothesized relationships was estimated using the procedures described by Marks (1982). The factor relationship indicating the largest necessary sample size is used in order to assure confidence in the research findings. In the present study, of all the relationships calculated, the relationship between parenting perceptions and self-esteem indicated the largest necessary sample size to achieve ninety-five percent confidence in the findings. Using the tables for hypothesis testing provided by Marks (1982), the data indicate a sample size of 82 is needed for a repeated measures project. Because the present project does not include repeated measures the number 82 was doubled to give the needed sample size of 164 subjects in the two groups. It was projected that

Table 3-1

Social Characteristics of Counties from which Participants were Obtained


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County of Residence	Percent Nonwhite Population	Population	Per capita Personal Income
County A	22.5%	181,596	14,719
County C	19.2%	42,613	11,947
County D	9.4%	10,585	9,690
County G	9.4%	9,667	12,947
County M	14.2%	194,833	12,699
County P	20.1%	65,070	11,304

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Note. Florida Healthy Mothers, Healthy Babies, 1992

the research objectives could be achieved with 95% confidence using a sample of 164 subjects in each group.

The number of subjects selected from each county was made proportional to the average number of adolescent births in that county per year. The number of pregnant and never-pregnant adolescents obtained in each county is identified in Table 3-2.

The following selection criteria were used to identify appropriate subjects for participation in the research. It should be noted that no potential subjects were excluded. However, numbers of subjects from each county were limited in order to obtain the desired representativeness.

A. For pregnant adolescents:

1. Ages between 13.0 years and 18.9 years.
2. A pregnancy presently carried beyond the 24th week of gestation
3. No report of previous deliveries of infants

B. For the never-pregnant adolescents:

1. Ages between 13.0 years and 18.9 years
2. No report of previous deliveries of infants
3. Attending secondary school in the public school system.

#### Pregnant Subjects

The researcher introduced herself to health department personnel prior to data collection; key personnel were identified to facilitate entre.

Relationships with these key personnel proved invaluable in determining the

Table 3-2

Subject Sampling and Adolescent Birth Information By County of Residence

	Average Births Per Year to Adolescent Mothers	Number of Pregnant Adolescents Sampled	Number of Never-Pregnant Adolescents Sampled
County A	243.3	54	74
County C	85.7	19	40
County D	23.7	5	20
County G	16.0	5	--
County M	310.0	57	59
County P	144.7	24	--

Note. Florida Healthy Mothers, Healthy Babies, 1992

best approach for data collection in the specific county clinic, i.e., a room or space for subjects' comfort, approaches for effective review of charts. However, in every clinic the best time for data collection was determined to be the waiting period following initial patient assessment (weight, blood pressure, and high risk factors) but prior to being examined by the nurse midwife or physician.

For each county health department site, a two month cycle of time was blocked for subject selection during the regular maternity clinic days. Only subjects meeting all subject selection criteria during this predetermined time period were asked to participate in the research. Participation was voluntary. Only two individuals declined to enter the study.

#### Never-pregnant Subjects

Each county selected was intended to be the source for obtaining a sample of never-pregnant adolescent females. Such a sample provided a matched group for comparison on the significant population characteristics. Public schools in each county served as resources for the never-pregnant sample. Contacts were initiated by a telephone conversation followed with a letter detailing the study. Specific procedures for obtaining permission to conduct the research were individualized according to policies of each of the six participating counties.

Administrators in two counties refused to have students invited to participate in the research. Administrators of one school district cited a lack of time in the school day for the students to participate. In the other school

district where the researcher was refused access to the student population concern was expressed that the theme of the research would be upsetting to parents. These counties were not replaced by other representative counties.

In counties where the never-pregnant sample was drawn, administrators selected the specific schools and classes for subject selection. Administrators were informed of the eighth through twelfth grade selection criteria; the researcher also requested access to classes in which there was a mixture of social and educational backgrounds. As a result, data collection was completed in physical education, health, human growth and development, and study periods. In these groups, there was a return rate of 58% for the adolescent and parent consent forms resulting in a sample size of 204 subjects.

#### Limitations

No attempt was made to determine the influence of other historical events such as having recently discovered a poor test grade, breaking up with a boyfriend, or fighting with parents. Such concerns may, however, affect the adolescent's report of self esteem or the report of the relationship with the parents.

The selection of pregnant adolescents from public health care agency registrations biases subject selection since the total population of pregnant adolescents is not represented. Adolescents seeking prenatal care from private obstetrics services were not represented in this sample. Nationally it

has been repeatedly shown that adolescents are the most likely pregnant group to receive little, late, or no prenatal care. However, it was not believed to be a serious threat to validity; in the counties participating in the study, the vast majority of all women, including adolescents, receive first and second trimester prenatal care.

Another limitation of the study is the volunteer nature of the sample. Of the subjects potentially eligible in the never-pregnant group, 42% who initially volunteered were not able to complete the study because consent forms were not returned. It is impossible to retrieve any of the characteristics of that population. Therefore, a complete data set was not obtained due to the response rate.

Only two of the 166 invited pregnant subjects invited refused to participate. It is interesting to note that the mothers of both refusal subjects were present and gave negative verbal feedback to the adolescent about participation when the research was explained. There may be differences between the subjects who consent to participate and those who refuse. However, this factor should be considered to have little practical impact on the pregnant participant group given the relatively small number of individuals who refused.

#### Instrumentation

Four research instruments in addition to a demographic instrument were used to obtain data. These were: (1) Parental Bonding Instrument,



(2) Rosenberg Self-Esteem Scale, (3) Parenting Perceptions Instrument, and (4) Hollingshead Four Factor Index of Social Status.

The Parental Bonding Instrument (PBI) developed by Parker, Tupling and Brown (1979) provides a measure of the bonding aspect of the adolescent female's relationship with her mother, most specifically the perceived communication pattern between the adolescent and her mother. The instrument provides an assessment of two dimensions of family interaction: care and involvement, and control and overprotection. Using a four point Likert response scale for 25 items, the PBI assesses the parent's contribution to the parent-child bond from the child's perspective; as the child's perception of parent-child relationship becomes more positive the PBI scores increase.

The sample providing information for reliability studies of the PBI represented a well-educated, predominately older adolescent and adult population (17 to 40 years of age). Females were represented in slightly more than half of the 348 sample subjects. From these studies, Parker, Tupling, and Brown (1979) reported that the alpha correlation of two identical items in the administration was 0.704. Test-retest at a three week interval was 0.761. In addition, the split-half reliability for internal consistency was 0.879 for the care dimension and 0.739 for the overprotection dimension. Factor analysis revealed two underlying factors, care and overprotection, of the PBI which was appropriate for its stated dimensionality.

Based on a sample of 65 subjects, concurrent validity was assessed through two independent rater's scores for parental care and overprotection during an interview given at the same time as PBI administration. Pearson Product Moment correlations for each rater's score with the dimension of the PBI were 0.772 and 0.778 while the correlations for overprotection were 0.478 and 0.505 indicating moderate to strong concurrent validity.

The PBI is not reported to have any obvious biases. The language used is appropriate for a low reading ability level. Previous use of the instrument with an adolescent population has been documented. Horn and Rudolph (1987) investigated verbal interaction, knowledge of sexual behavior and self-concept in adolescent mothers using the instrument; these researchers did not report any difficulties using this instrument with adolescent females.

Self-esteem as a part of self perceptions was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This scale was developed specifically for use with adolescent populations to measure the individual's assessment of self-worth. It is a second generation measure of the Kuhn and McPartland (1954) measures of self (Twenty Statements Self-Attitudes Test) based on symbolic interaction theory. In the development of the Rosenberg Scale, meanings of self-esteem were defined to be 1) that the person thinks of self as "very good" as related to others and 2) thinking of self as "good enough" in relation to the standards the individual set for self. High self-esteem for an individual expresses a feeling of "good enough";

that is, the individual accepts self according to the standards set for self, not in relationship to others. This individual respects self, feels self worth, and is self-accepting. On the other hand, low self-esteem implies self-rejection, self-dissatisfaction, and self-contempt. Any interpretation of the Rosenberg Scale must consider the "good enough" internal standard comparison focus of the instrument.

The Rosenberg Scale is a 10 item instrument with responses recorded on a four-point Likert scale (strongly agree to strongly disagree). The ease of administration of the instrument makes it particularly appropriate for adolescent populations. In scoring the ten items, five negative content items must be reverse scored. When the items are reverse scored, all items are summed to give the total score for each individual. The higher the total Rosenberg Self-Esteem Scale score, the higher the individual's assessment of self-worth.

Research on reliability and validity of the instrument was completed on a sample of 5,024 junior and senior high school students in the state of New York. Rosenberg (1965) determined that the instrument had a reproducibility coefficient of 0.92 and a scalability coefficient of 0.72 in reliability studies.

Rosenberg reported that face validity was examined as the initial validity procedure (1965). In development of the scale, items which directly and openly dealt with the dimensions of self-esteem were deliberately chosen. Also, both positive and negative items were presented to

adequately explore the individual's feelings as well as to reduce response set bias.

Construct validity was measured through the theoretical relationship of depression to low self-esteem. Fifty volunteer patients completed the Rosenberg scale. At the same time nurses who were unaware of the patient's participation in the study ranked each patient for depression. A significant association between depression and self-esteem was noted; depressed patients also reported low self-esteem.

Furthermore, the developers theorized that low self-esteem is clinically associated with neurosis. They therefore examined the relationship between occurrence of neurotic symptoms and self-esteem. A relationship between the level of self-esteem and psychosomatic symptoms of anxiety was demonstrated indicating the validity of the Rosenberg scale.

As a final measure, the relationship between self-esteem and peer rating of leadership in individuals was assessed. A positive association was found between the measures. This indicated that self-esteem was associated with positive constructs as well as negative ones.

Hollingshead Four Factor Index of Social Status (Hollingshead, 1975) was used to describe the subject's social environment. This includes the variables of occupation, education, sex, and marital status as factors to determine one's status position in society. The resultant stratum identified for each individual became part of the constellation of variables used to explore factors influencing development of one's self-concept.

Years of education reflect the acquired knowledge and cultural values of the head of the household. In theory, this knowledge and these values then lead the other family members and are noted in the general position of the family socially. Occupation is important in determining social status since it indicates the abilities the individual must possess in order to perform their social role. These two variables are used for numeric calculation of social status.

In addition, Hollingshead included gender in the instrument because of the relationship of one's gender to the roles played in the performance of social functions. Also, marital status is reflected in the instrument through the various ways individuals in the marital dyad participate in the economics of a society. However, these variables do not contribute to calculation of the Hollingshead score as unique variables themselves. Gender contributes to the score through consideration of male and female occupational roles in determining social status. Marital status is included in that scores are determined for only those individuals who actually earn an income as family heads; dual income family scores are calculated through an average of the status scores of the wage earners. Single parents and one-wage-earner family scores stand on the basis of the sole wage earner. Earlier forms of the Hollingshead index were based solely on the work of the male head of the household.

In the present research project, each variable was coded according to the criteria described by Hollingshead (1975). Data were used for the head

or heads of the household as identified by the subjects. Education and occupation for the adolescent's parent(s) were assigned a value according to the scales provided by Hollingshead. For example, a bank teller with a high school education receives an education score of 4 on a seven point scale and an occupation score of 5.

Status was then estimated by using the following formula:

- 1) The scale value for occupation was multiplied by a weight of five (5).
- 2) The scale value for education was multiplied by a weight of three (3).
- 3) The scores were summed.
- 4) When two adults in the family were employed, the scores for each were summed and the total divided by two to determine the total status score.

Computed scores were then used to identify the social strata for the subject. An assumption of the scale is that the higher the score of a family, the higher the status of those family members in society. Hollingshead assumed that society ascribes different values to various levels of education and occupational functions of individuals. Therefore, five categories were used to describe social status: (5) major business and professional, (4) medium business, minor professional technical, (3) skilled craftsmen, clerical, sales workers, (2) machine operators, semiskilled workers, (1) unskilled laborers, menial service workers. To aid clarity in interpretation

of results, these categories were used in reverse order from that described by Hollingshead (1975).

Several analyses of validity of the index have been reported (Hollingshead, 1975). Using data from the United States Census in 1970, linkages between education and occupation were analyzed. A gradient between years of education completed and occupational score was noted. Furthermore, the correlation between median years of education completed and occupational score for males ( $r = 0.835$ ,  $p = 0.00001$ ) and females ( $r = 0.849$ ,  $p = 0.00001$ ) was similar. In addition, scores assigned to occupation groups were found to correlate with prestige scores developed by the National Opinion Research Center for the General Social Survey ( $r = 0.927$ ). According to this validity analysis, Hollingshead reported that these interrelationships demonstrate that a status system exists in American society based on the individual's education, occupation, and gender.

In the social environment, this constellation of race and social status provided the independent variables for data analysis with the outcome measures. It should be noted that other factors in the social environment, such as peer relations and school performance, were not used in this study. That does not, however, diminish the relative importance of these factors for the population of interest.

Parenting Perceptions Instrument (Dormire, 1989) was used to measure the perceptions of motherhood dimension of this research (Appendix A). This twenty item instrument contains Likert-type responses

used to explore the positive and negative perceptions the adolescent has concerning motherhood. The adolescent's perception of herself and her life as she believes it would be were she a mother at her present age is addressed in the instrument. A total score is determined by summing individual item scores. A high score indicates a positive perception of early parenting while a low score indicates a negative perception of early parenting.

The Parenting Perceptions Instrument (PPI) was adapted from previous work with adolescent mothers (Speraw, 1987). Speraw used an exploratory descriptive design for a cross cultural study of adolescent perceptions of pregnancy. For her research, Speraw administered a 30-item open-ended questionnaire during an interview (Adolescent Motivation for Pregnancy Questionnaire). Responses to the questions were content analyzed.

Responses to the PPI questions are formatted into a forced choice. This format was chosen in order to aid ease of administration to large numbers of research participants. Responses used in the PPI were developed from those answers given by adolescents in the Speraw study as well as from information gathered in previous work with adolescents by the researcher. Equivalence reliability is provided through the use of alternate forms for selected questions. Response set bias is reduced in the instrument through the use of both positive and negative focused questions. Other reliability results in the instrument development were presented in the discussion of the pilot study.



### Data Collection Procedure

Those subjects who consented to participate in the study first completed a demographic questionnaire (Appendix B) which included the questions appropriate for calculation of social status. Next, to avoid possible effects of testing on the outcome variable, the Parenting Perceptions Instrument was completed. The Rosenberg Self-Esteem Scale was next completed, followed by the Parental Bonding Instrument.

Upon completion of the research instruments, subjects were asked if they had any questions or problems with the questionnaire. Any questions were answered, although there were few. The most frequently expressed concern was with the definition of the word affectionate; a definition was given as requested.

Subjects were then given a gift pack for their assistance in the research process. The gift packs included health information such as breast self-exam, avoiding smoking, prevention of sexually transmitted diseases, and proper nutrition for adolescents contributed by health and community organizations. Each also included a colorful writing tablet and pen as well as a coupon of a meal at a local restaurant. Separate gift packs were developed specifically for the pregnant and never-pregnant subjects with the variation centering on information needed by the pregnant adolescent (feelings of the pregnant adolescent, preparing for parenting, self care in the last trimester, newborn care, contraceptive decision-making, and community resources). The intent of the gift pack, beyond providing reciprocity for

subject participation, was to distribute health literature of interest to adolescents.

### Data Analysis

The analysis of these data included the use of descriptive statistics to illustrate the data. With the exception of race and pregnancy status, the measures of all variables in this study provide continuous data for analysis and are described by their means and variance. Only percentages are used to describe the categorical findings obtained in the demographic information concerning race.

For hypothesis testing, these data represent multiple factors and multi-level response data. Analytic techniques appropriate for non-recursive causal models were used to analyze the direct and indirect effects of the variables. Ordinary least squares was used to determine the path coefficients for each pair of variable relationships. Such analytic techniques are appropriate when the variables are measured on at least the interval level, the sample is randomly selected, and there is a high degree of reliability in the measures (Godwin, 1988).

Standard scores were used for data analysis. This approach to analysis was appropriate since the relative importance of independent variables within population subsets was of interest to the study. According to Asher (1987) use of the standard score adjusts for different scales of measurement for the variables, making standard scores appropriate for analysis in this study.

However, one must also consider that this analysis alone does not accurately describe the relationships in the model. Residual variables not considered by the model also have an impact the relationships of interest. Calculation of these residual relationships provides information about the strengths and weaknesses of the specified model (Asher, 1987). The residual path coefficient in a non-recursive model represents "the amount of change in the dependent variable that is to be expected as a result of a change of one standard deviation unit in the disturbance" (Luskin, 1978, p. 466). Therefore, residual path coefficients were determined and are identified in the model.

## CHAPTER IV RESULTS

In this study the following research question was addressed: is there a causal relationship between selected sociocultural variables, self-esteem, perceptions of motherhood, and pregnancy in adolescent females?

Relationships between and among these variables were tested in a conceptual model developed by the researcher. Data were collected from pregnant adolescents in county prenatal clinics throughout North Central Florida. Each of these subjects was in at least the twenty-fourth week of her pregnancy. Never-pregnant adolescents were selected from the same counties as those who were pregnant when officials in the public school system consented to have the researcher approach student subjects. All participants had reached at least their thirteenth birthday but had not yet reached their nineteenth birthday.

The Parental Bonding Instrument (Parker, Tupling, & Brown, 1979), measuring care and overprotection in the adolescent's relationship with her mother, the Hollingshead Four Factor Index (Hollingshead, 1975), measuring social status, the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the Parenting Perceptions Instrument (Dormire, 1989), measuring the adolescent's perception of motherhood as a role for her, were the instruments selected to explore the variables of interest. Demographic data were also obtained to analyze selected characteristics in the adolescent

population. Descriptive and inferential statistics were used for data analysis. Results of the data analyses are presented as follows: (1) demographic data, (2) scale data, and (3) causal model data.

#### Demographic Data

A sample of 164 pregnant subjects was obtained through six county prenatal health clinics throughout North Central Florida. The number of subjects from each county site was proportional to the annual number of all adolescent pregnancies in that county. Data collected from the pregnant subjects were complete, i.e., no data were missing.

In the never-pregnant sample data were collected from 204 female volunteers in four county public school systems. Data were missing from 11 individuals resulting in a final sample of 193 subjects for data analysis. Differences between the pregnant and never-pregnant samples in the amount of missing data may be attributed to the methods of data collection with each group. Pregnant subjects were approached on a one-to-one basis.

The mean age of the total sample ( $n = 357$ ) was 16.55 years (Table 4-1). The girls who were pregnant were older (mean = 17.08 years) than the never-pregnant sample (mean = 16.09 years). Subjects had completed between six and thirteen years of schooling. Pregnant subjects, while older than never-pregnant subjects, had a wider range of school grades completed. The pregnant sample included one individual who had completed only the sixth grade, and two individuals who had completed one year of post-secondary education. However, neither sample was at the

Table 4-1

Summary Measures of Age and Years of Education for Total Sample,  
Pregnant Sample (n = 164), and Never-Pregnant Sample (n = 193)

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AGE	Mean	S.D.	Minimum- Maximum
Total Sample	16.55	1.40	13.0 - 18.9
Pregnant	17.08	1.22	13.5 - 18.9
Never-Pregnant	16.09	1.39	13.0 - 18.8
YEARS OF EDUCATION			
Total Sample	9.51	1.31	6.0 - 13.0
Pregnant	9.73	1.35	6.0 - 13.0
Never-Pregnant	9.33	1.27	7.0 - 12.0

---

anticipated grade level for reported age; the pregnant subjects had a greater age/school grade level discrepancy for average age than did the never-pregnant subjects.

The percentage of black subjects in the never-pregnant sample was representative of the general population in the study region. However, as Table 4-2 indicates, the two subject groups varied with regard to race. The pregnant sample contained proportionally more blacks (43% of the total) while black subjects in the never-pregnant sample represented only 21.7% of the total. These percentages are representative of the distribution of pregnancy by race in the research area. The never-pregnant subjects were also slightly more diverse in other racial categories (Hispanic, Native American, and other) represented than was the pregnant sample (Asian).

A Chi-square test on the variables pregnancy by race indicated that the null hypothesis, statistical independence of these variables, should be rejected. In this analysis, Chi-square = 30.54,  $p = .0001$ , demonstrated support for the alternate hypothesis that race and adolescent pregnancy are statistically dependent. There was a significant difference in the rate of pregnancy between the racial groups.

All of the never-pregnant subjects were single while 48 of the 164 pregnant subjects were married. No attempt was made to determine if the pregnant adolescents married before or after conception.

Table 4-2

Frequency and Percentage of Participants Race and Martial Status

Variable	Pregnant n(%)	Never Pregnant n(%)	Total n(%)
<u>Race</u>			
Asian	4 (02.4%)	0	4 (01.1%)
Black	69 (42.1%)	40 (20.7%)	109 (30.5%)
Hispanic	0	5 (02.6%)	5 (01.4%)
Native American White	0	3 (01.6%)	3 (00.8%)
Other	91 (55.5%)	144 (74.6%)	235 (65.8%)
Total	0	1 (00.5%)	1 (00.3%)
	164(100%)	193(100%)	357 (100%)
<u>Marital Status</u>			
Single	116 (70.0%)	193 (100%)	309 (86.6%)
Married	48 (29.3%)	0	48 (13.4%)
TOTAL	164 (100%)	193 (100%)	357 (100%)



## Scale Data

### Social Status

Data collected in the demographic questionnaires included information concerning the head or heads of household. These data were then used to calculate a social status ranking for each subject. Table 4-3 below illustrates the rank frequencies, according to the Hollingshead Index (Hollingshead, 1975), for all subjects in both the pregnant and never-pregnant groups.

Social status differences between pregnant and never-pregnant subjects were remarkable. Most striking are the differences between the groups at the extremes of the social status scale. Of the never-pregnant adolescents 16.6% were in the Major Business and Professional category while only 0.61% of the pregnant adolescents were similarly categorized. By contrast, pregnant subjects were over represented in the Unskilled Laborers and Menial Service Workers category (41.5%) but only 7.8% of families of never-pregnant subjects were similarly categorized.

The Wilcoxon Rank Sums Test was performed on these data. This test was done to examine whether the distribution of social status ranks between pregnant and never-pregnant samples have the same location across different groups. The results indicated that these distributions were not the same ( $Z = -4.38$ ,  $p = .0001$ ). The differences in social status characteristics of the two samples were found to be statistically significant.

**Table 4-3****Frequency and Percentage of Hollingshead Social Status Categories**

<u>Category</u>	<u>Pregnant</u> n (%)	<u>Never-Pregnant</u> n (%)
Professional	1 (00.6%)	32 (16.6%)
Business	23 (14.0%)	74 (38.8%)
Technical	25 (15.2%)	40 (20.7%)
Skilled Laborer	47 (28.7%)	32 (16.6%)
Unskilled Laborer	68 (41.4%)	15 (07.8%)
Total	164 (100%)	193 (100%)

### Parental Bonding

The Parental Bonding Instrument, PBI, (Parker, Tupling, & Brown, 1979) is used to assess the dimensions of care and overprotection in the parent-child relationship as perceived by the child. Parker, Tupling, and Brown (1979) report mean scores of 24.9 for the care dimension and 13.3 for the overprotection dimension. These normative data are compared with findings in the adolescent sample in Table 4-4.

Scores can range from 0 to 36 on the care dimension of the PBI and can range from 0 to 39 on the overprotection dimension. Scores of the adolescent sample varied widely but not to the extremes of the dimensions scores.

### Self-Esteem

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to measure the self-esteem variable in the model. It is a measure of global positive and negative attitudes toward the self among adolescents. The higher the individual's self-esteem, the higher the scale score. Table 4-5 presents the summary measures of the adolescent subjects in the study. It is interesting to note that the mean score of the pregnant sample was higher than that of the never-pregnant sample.

The Wilcoxon Rank Sums Test performed on these data indicate that the distribution of this variable does not have the same location between the groups ( $Z = 9.67, p = .0001$ ). The analysis of self-esteem indicates that the two groups differ in their reported level of self-esteem; the pregnant

Table 4-4

Summary Measures of Parental Bonding: Care and Overprotection

Dimension	Mean	S.D.	Minimum-Maximum
<b>CARE</b>			
Normative Data	24.90	(Not Reported)	
Pregnant	25.43	6.18	1 - 35
Never-Pregnant	24.04	6.38	1 - 35
Total Sample	24.68	6.32	2 - 33
<b>OVERPROTECTION</b>			
Normative Data	13.30	(Not Reported)	
Pregnant	14.57	5.71	2 - 33
Never-Pregnant	16.30	5.99	2 - 35
Total Sample	15.51	5.92	2 - 35

Table 4-5

Summary Measures of Self-Esteem

Sample Category	Mean	S.D.	Minimum-Maximum
Total Sample	30.35	4.63	15 - 40
Never-Pregnant	29.62	4.70	15 - 40
Pregnant	31.23	4.40	19 - 40

subjects perceive themselves to have statistically higher self-esteem than do the never-pregnant subjects.

### Parenting Perceptions

The Parenting Perceptions Instrument, PPI, (Dormire, 1989) was used to assess the adolescent's perceptions of motherhood as it is perceived at her current age. The means, standard deviations, and range of scores in the sample are presented in Table 4-6. These findings indicate that the pregnant subjects placed a higher value on adolescent motherhood than did the never-pregnant subjects.

The Wilcoxon Rank Sums Test on these data indicated that the distributions between the two groups, pregnant and never-pregnant, were significantly different ( $Z = 12.85$ ,  $p = .0001$ ). Therefore, these groups significantly differed in their reported perceptions of motherhood for the current age.

### Causal Model

In causal modeling, emphasis is placed on explanation of variability of a dependent variable through the use of information from one or more independent variables. This modeling technique is a useful device for visual display of the hypothesized relationships between the research variables. For each independent variable there is a path coefficient indicating the amount of expected change in the dependent variable as a result of a unit change in the independent variable.

Table 4-6

Summary Measures of Perceptions of Motherhood

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Sample Category	Mean	S.D.	Minimum-Maximum
Total Sample	17.52	4.73	5 - 32
Never-Pregnant	14.66	3.69	5 - 25
Pregnant	20.87	3.45	12 - 32

---

Analysis in causal modeling is a structural equation modeling technique. Estimated coefficients are expressed in standard form. In analysis of these data, the coefficients were obtained from ordinary least squares regression. In addition to direct effects, the indirect effects were computed. Direct and indirect effects were then added together to obtain total effects.

In this research, a series of multiple regression equations was calculated. First, a correlation analysis was performed on the measures of significant research variables. Pearson Product Moment correlation coefficients were used to examine relationships between adolescent pregnancy, social status, parental bonding characteristics (care and overprotection), self-esteem and parenting perceptions.

As illustrated in Table 4-7, the correlations reveal that adolescent pregnancy is significantly related to the research variables of the model with the exception of the overprotection dimension of bonding. In particular, a strong correlation between pregnancy and perceptions of early motherhood was demonstrated ( $r = .68, p = .0001$ ). This relationship indicated that pregnancy was directly associated with perceptions of parenting at the adolescent's current age. While the influence of social desirability must be considered, the magnitude of the association between these critical variables in the model cannot be ignored.

Table 4-7

Correlations Between Significant Variables in the Research Model

Variable	1.	2.	3.	4.	5.	6.	7.
1. Race	1.00	0.22**	0.04	0.00	-0.12*	-0.17**	-0.24**
2. Social Status		1.00	0.07	0.04	-0.06	-0.34**	-0.51**
3. Bonding: Care			1.00	-0.47**	0.30**	0.13*	0.11*
4. Bonding: Over-protection				1.00	-0.26**	-0.19**	-0.15
5. Self-Esteem					1.00	0.20**	0.17**
6. Parenting Perceptions						1.00	0.68**
7. Pregnancy							1.00

\* Significant at .05  
 \*\* Significant at .01



Social status of the adolescent was found to be inversely related to with pregnancy ( $r = -0.51, p = .0001$ ) and perception of motherhood ( $r = -0.35, p = .0001$ ). The moderate correlations between social status and the variables of pregnancy and parenting perceptions indicated that as social status decreased in the sample, the valuing of early motherhood increased as did the incidence of pregnancy. However, the direction and statistical significance of the relationships indicate support for the related research hypotheses. These data indicate that social status is inversely related to perception of motherhood for adolescent females as was indicated by Hypothesis 1. In addition, the data indicate that social status is inversely related to the incidence of adolescent pregnancy (Hypothesis 2).

Race was found to be significantly related to each research variable except the two dimensions of bonding with mother. No relationships were found between the dimensions of bonding and race; race was not found to influence the perceived quality of intra-familial relationships between mother and child. A direct relationship between race and social status was found ( $r = .22, p = .0001$ ); social status was found to be higher in the white participants. The correlation between race and self-esteem ( $r = -0.12, p = .02$ ) indicated that self-esteem was higher in the nonwhite participants. This finding supports Hypothesis 8: race is related to self-esteem for adolescent females.

Race was also found to correlate with perception of pregnancy ( $r = -0.17, p = .002$ ) indicating that nonwhite participants held more positive

perceptions of motherhood than did the white participants. Hypothesis 4 is then supported by the data; race is found to be related to perception of motherhood. The data also exhibit a significant relationship between race and adolescent pregnancy. The correlation between these variables ( $r = -.24$ ,  $p = .0001$ ) demonstrate that adolescent pregnancy is associated with nonwhite races, supporting Hypothesis 3.

Correlation analysis of the bonding variable with other research variables indicated that Hypotheses 5, 6 and 7 could not be supported. Contrary to Hypothesis 5, bonding with mother was not directly related to self-esteem for the adolescent. The correlations between the dimensions of bonding with self-esteem did reach significance but only the overprotection dimension was in the hypothesized direction ( $r = -.26$ ,  $p = .0001$ ); as adolescents in this sample perceived increasing overprotection in their mothers, self-esteem decreased. Although the correlations were moderate and highly significant ( $r = .30$ ,  $p = .0001$ ), the care dimension of bonding was directly related to self-esteem; the relationship was not inverse as indicated in the hypothesis. Because the direction of the relationship for each dimension of bonding was not as predicted, Hypothesis 5 cannot be accepted.

Hypotheses 6 and 7 were supported by the data. Correlations between bonding and pregnancy perception as well as bonding and adolescent pregnancy were inverse. Such relationships in the data

demonstrate statistical evidence that as the mother becomes increasingly overprotective, the daughter perceives motherhood less positively and is often associated with an adolescent pregnancy. What had not been predicted was that the care dimension of bonding would be directly related to these research variables. Higher measures of caring in the adolescent's mother were associated with positive perception of motherhood and higher incidence of adolescent pregnancy. It is unclear, however, if this caring is newly perceived as a result of the family changes with late pregnancy or if it is perceived to have existed in the relationship prior to the pregnancy. Therefore, it is difficult to draw conclusions about this relationship.

In these data, self-esteem correlated with parenting perception. The correlation ( $r = 0.20$ ,  $p = .0001$ ) indicated that as self-esteem increased the valuing of early motherhood also increased. From these data Hypothesis 9 cannot be supported. While a relationship was found between self-esteem and perception of motherhood and the relationship was significant, it was not in the direction predicted. If the basic premise of the causal model as derived from the Human Agency Model of Behavior (Dormire, 1989) is true, these data are contaminated by the effect of pregnancy. The adolescent selecting a trajectory of early motherhood would then be positively influenced by the pregnancy.

Hypothesis 10 indicated that self-esteem is inversely related to adolescent pregnancy. The correlation analysis, however, indicated that self-esteem is directly related to adolescent pregnancy ( $r = 0.17$ ,  $p = .001$ ). Although the hypothesis could not be accepted, the data indicate that self-esteem improves with pregnancy for adolescent females.

The correlation data indicate that perception of motherhood is directly related to adolescent pregnancy ( $r = .68$ ,  $p = .0001$ ). In this sample, a strong association was found between positive perceptions of motherhood and pregnancy. Therefore, Hypothesis 11 is supported by these data.

The path diagram (Figure 4-1) illustrates relationships in the causal model, as previously described, with respective path coefficients and residual coefficients. Race was significantly related to self-esteem and to pregnancy but not significantly related to perception of motherhood. Social status was found to be significantly related to perceptions of motherhood as well as to pregnancy. Direct path coefficients of model relationships demonstrated that social status had a significant direct effect on perceptions of motherhood (.32). The dimensions of bonding with mother were found to be significantly related to self-esteem and to motherhood perceptions. Finally, as predicted, the adolescent's perception of motherhood had a direct effect on pregnancy.

An important finding from the model analysis is that several of the previously described correlations were diminished significantly in strength. The association between race and pregnancy diminished from -0.24 in the

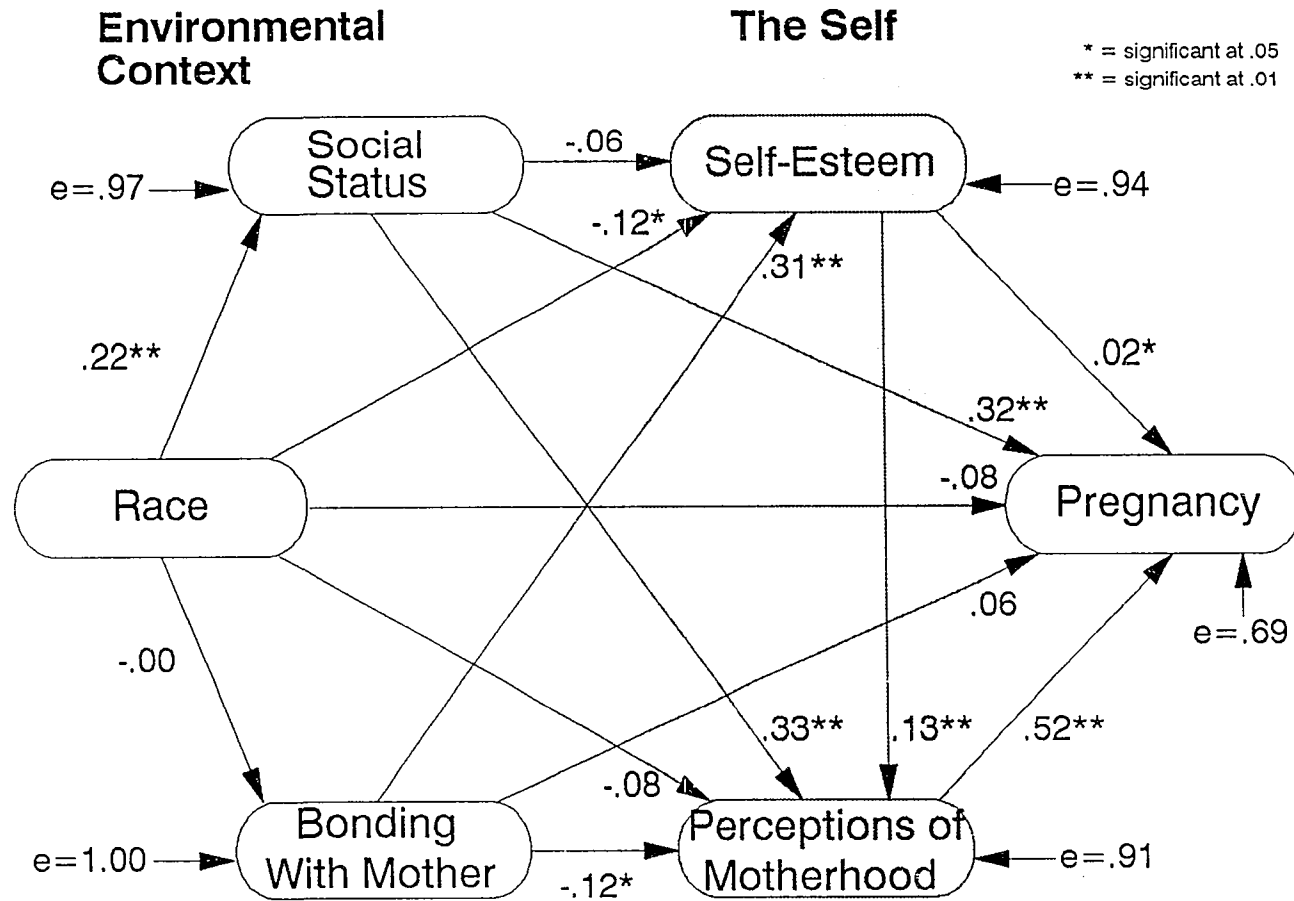


Figure 4-1

Path Analysis Coefficients of the Conceptual Model

correlation analysis to  $-.08$  in the model analysis. The effect of social status on pregnancy diminished in the model analysis (from  $-0.51$  to  $-0.32$ ). The path from social status to pregnancy through perception of motherhood accounts for the diminished effect found in the causal model. These data indicate that the model has significant explanatory power concerning the influence of these variables on adolescent pregnancy. The association between race and adolescent pregnancy is explained largely by the model. Further, the model contributes to understanding the relationship between social status and adolescent pregnancy as well.

The direct, indirect, and total effects of all variables on pregnancy are presented in Table 4-8. As is readily apparent from Figure 3, the most significant direct effect is that of perceptions of motherhood on pregnancy ( $.52$ ); twenty-six percent of the variance in adolescent pregnancy is explained by the individual's perception of motherhood.

As indicated in Table 4-8, the highest total effects in pregnancy were by motherhood perception ( $.52$ ) and social status ( $.48$ ). Race and self-esteem had weak total effects on pregnancy and bonding had zero total effect on pregnancy.

The residual value for each endogenous variable represents those factors that actually affect the endogenous variable but were not actually measured in the study (Asher, 1987). Ideally, a small residual value is desired; the model can then be presented as having strong explanatory power for the phenomenon of interest. As noted in Figure 4-1, however, each of the endogenous variables in the present research model has a large

Table 4-8

Direct, Indirect, and Total Effects of Variables on Pregnancy

Variables	Effect on Pregnancy		
	Direct	Indirect	Total
Race	-.08	-.01	-.09
Social Status	.32	.16	-.16
Bonding	.06	-.06	.00
Self-Esteem	.02	.07	.09
Motherhood Perception	.52	.00	.52

residual value. These large values explain the variations in dependent variables unaccounted for by the independent variables in the conceptual path model.

In summary, the data from this study provide further support for the significance of relationships between previously identified variables and adolescent motherhood. The data gathered from the adolescent sample are not fully consistent with the Human Agency Model of Behavior, posited as a priority in this study. However, significant relationships were demonstrated and provided explanatory power for the research variables. In particular, significant variables in the relationship between race and adolescent pregnancy were identified.



## CHAPTER V SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Introduction

The research question addressed in this study was: Is there a causal relationship between selected sociocultural variables, self-esteem, perceptions of motherhood, and pregnancy in adolescent females? The study used a retrospective case control design since a sample of pregnant adolescents was compared with a sample of adolescents who had never experienced a pregnancy.

Analysis of the data indicates that there are significant differences between pregnant and non-pregnant adolescent females. The variables identified provide some explanatory powers for adolescent pregnancy according to the model presented. This chapter will present a discussion of the meanings of the data and the unexplained variance. Also, the professional practice implications of the findings and recommendations for future study will be provided.

### Summary

The perspective of the individual as a self agent formed the basis for the study. *Continual, mutually influencing interactions between a unique individual and the given environment are the foundation for behavior in the model developed from this perspective, The Human Agency Model of*

Behavior (Dormire, 1989). Domains of interest in the model are the environment (physical and social), the individual self agent, life trajectories, and resultant outcomes. However, what is worth noting about the domains are their various interactions and the meaning given to them by the individual. By ascribing meaning, each individual creates her own reality.

Based on these model perspectives, adolescent motherhood was examined as an outcome for adolescent females within specific environmental contexts. From analysis of previous research, specific variables have been repeatedly associated with the phenomenon of adolescent motherhood: black race, lower socioeconomic status, and extreme characteristics in the mother-daughter relationship. These variables were analyzed as antecedents to development of self perception as an agent for achieving status given the environmental situation.

Used in this context, agent refers to power or control over self or environment. One who perceives herself to be an agent believes she is able to achieve personal uniqueness and success based on individual qualities as well as abilities. However, an individual who perceives limited self agency believes she is limited in personal choice. She is limited in self development to the choices given by her environment. The individual is not completely free to achieve goals she alone believes she can reach.

From this perspective, individuals influenced by socially limiting environments were predicted to choose adolescent motherhood as a route to personal status and achievement. In this model, the individual field of

options for self development are perceived as limited; personal qualities are not individually defined as adequate for overcoming structural restrictions in the environment. Under these conditions, motherhood becomes an attractive alternative for movement toward adulthood.

The defined associations between the Human Agency Model of Behavior variables formed the framework for analysis of a causal relationship between perspectives of the social and physical environment, self perceptions, life options, and outcomes, specifically that of adolescent motherhood. In order to study these relationships, a convenience sample of adolescents beyond their twenty-fourth week of pregnancy was drawn from six randomly selected public health units. The sample size selected from each of these public health units was based on the number of adolescent pregnancies per year in the home county of the unit. A stratified sample of 164 pregnant subjects was collected over a seven month period in the spring and summer of 1989 in the North Central Region of Florida.

In order to fully assess the causal relationship between valuing of motherhood and the incidence of pregnancy, a sample of never pregnant adolescents was selected from four of the six participating counties. The public schools in those counties served as sites for the never-pregnant sample subject selection. In each school the principal selected classes based on social characteristics which would best represent the total population of that school. Therefore, physical education and health classes were used in three of the four county sites. In the fourth site study periods were selected

throughout the day. With the exception of an altered sociodemographic form, the never-pregnant adolescents ( $n = 193$ ) completed the same test battery as did the pregnant adolescents.

Descriptive and inferential statistical measures were used to analyze the data. A correlation analysis was performed in order to determine which variables were statistically related. Then path analytic techniques were used to analyze the correlations into their component parts. In order to examine direct, indirect and total effect of causes on the variables of interest, analytic techniques appropriate for a non-recursive model were used, specifically ordinary least squares determined the path coefficients for each pair of variable relationships.

Significant descriptive characteristics noted from the sample included race and education. The pregnant sample included significantly more black adolescents than did the never-pregnant sample; furthermore, the data revealed that race and pregnancy are statistically dependent. Subjects in the pregnant sample were also slightly older than subjects who had never been pregnant. As might be expected from the framework of this study, however, the pregnant subjects were farther behind in their education for their stated age than were never-pregnant subjects.

Pregnant subjects expected to have a baby at an earlier age than the never-pregnant subjects. Caution must be used in interpreting these findings since the data were collected after pregnancy had already occurred and may have been accepted as a part of the adolescent's life; it is impossible to

fully discern whether the belief existed previous to the pregnancy or is a socially desirable response to the present situation. However, the pregnant group reported significantly more positive feelings concerning a pregnancy at their present age than were perceived by the never-pregnant group. These data provide some support for Lewis' (1966) position concerning a culture of poverty perpetuating itself through adolescent motherhood.

Significant correlations were noted between variables explicated in the model. Social status was correlated significantly to both pregnancy and perception of motherhood. The results indicate that adolescent females of lower social status strata were more likely to perceive pregnancy positively at their present age and were more likely to actually be pregnant than were adolescents in higher social strata.

Subjects in the pregnant group were found to have a significantly more positive perception of early motherhood than was perceived by the never-pregnant subjects. Immediately, one suspects that these data are contaminated by the pregnant adolescent's current situation. The pregnant adolescent may report a positive feeling about her current situation in an attempt to deal with it in a socially desirable manner. However, a comparison of self-esteem reported by the two groups casts doubt on this interpretation. Pregnant adolescents reported significantly higher self-esteem than was reported by the never-pregnant subjects. The Rosenberg Self-esteem Scale (Rosenberg, 1965) is a measure of global self-esteem; it is not reported to be influenced by social desirability. In all probability,

therefore, pregnant subjects reported genuinely positive feelings concerning their perception of their pregnancy. As a result, they appear to feel more positive about themselves as well.

Since correlation is not proof of causation (Asher, 1987), path analytic techniques were used to test the model as proposed a priori. Coefficients of the path analysis indicate that the data fit the model moderately. Many of the paths were found to be statistically significant but the magnitudes of the coefficients were small to moderate. However, an important finding from the model analysis is that several of the previously described correlations were significantly diminished, specifically the relationships between race and adolescent pregnancy and social status and adolescent pregnancy. These data indicate that the model has significant explanatory power concerning the influence of these variables on adolescent pregnancy.

Asher (1987) defines multicollinearity as the problem created when independent or exogenous variables in the model are correlated, particularly highly correlated. As indicated in chapter four, several significant correlations do exist between the exogenous variables. The magnitude of such correlations, however, ranges only from 0.06 to -.47. Asher indicates that correlations below 0.7 are probably not problematic. In addition, multicollinearity is less of a problem in survey data research due to the presence of random measurement error. Asher reports that "random error attenuates correlation coefficients, thereby making the problem of

collinearity less likely" (p. 52). Therefore, it does not appear that multicollinearity is an issue in these results. The more appropriate approach to dealing with these results would be to revise the model in light of the variables identified as significant in the correlation analysis.

### Conclusions

Results of this study indicated that pregnant adolescents differ from never-pregnant adolescents in several important ways. As predicted by the Human Agency Model of Behavior (Dormire, 1989), the major differences are found in the social and family environments as well as the self-perceptions of the adolescent. One social characteristic often associated with adolescent motherhood in the literature is lower social status; an association between motherhood and lower social status was found in the present study.

In addition, race as a physical characteristic of the pregnant adolescent was supported. Specifically, being black was found to be associated with early motherhood. A significant relationship was found between race and being pregnant as well as perception of motherhood and being pregnant. Yet, race was not related to perception of motherhood. Instead, other variables in the model were associated with positive motherhood perceptions.

Pregnancy was experienced as a positive life change for the adolescents in this sample. This finding provides some support for agency as a major concept in adolescent motherhood, but further research is needed

to clarify its role. Subjects perceived motherhood as desirable for their present age, wanted children early in life, and reported higher self esteem than did the never-pregnant subjects. Given the stressful life characteristics of the pregnant subjects (behind in their education, and lower social status) motherhood is theoretically an action of the self agent. The pregnant subjects perceived motherhood in an accepting and positive light. Further research is needed to determine if the positive perception of motherhood precedes or follows the pregnancy.

Although the error for each endogenous variable was large some support for the causal model of adolescent motherhood as constructed is provided by these data given the changes in correlations with significant exogenous variables. The identified relationships remain theoretically sound and were statistically correlated. However, the data indicate that adolescent motherhood is a multivariate phenomenon that has not been fully described by the model. Other factors must be included in order to develop the model as an accurate representation of the phenomenon. Such model modifications would include family structure (Freeman, Rickels, Mudd, & Huggins, 1984; Miller & Bingham, 1989; Stack, 1974; Staples, 1985, Zongker, 1977) and sexual activity (Brown, 1985; Chilman, 1983; Jessor & Jessor, 1975; Ladner, 1971; Zelnik & Kantner, 1977).

It appears that adolescents who become mothers perceive their position positively and may even desire to become mothers in adolescence. While the causal model as tested lends some support for this perspective,



the study lacks a true exploration of the meaning of motherhood to the adolescent. The question then emerges, what is the meaning of early motherhood to adolescents? Do adolescents with specific social, family and individual characteristics ascribe different meanings to motherhood than adolescents without those characteristics? In a related sense, the question is raised, do adolescents with a specific constellation of characteristics perceive limited life options aside from motherhood? Do adolescents perceive themselves to be limited in future options when confronted with social structural barriers, education, or family/friendship support? Or, do adolescents perceive these factors as limitations at all?

Other questions concerning meaning and perception also deserve consideration in order for relationships between the model constructs to be fully explicated. Given the incidence of early mothering by other family members in the pregnant sample, a question concerning cultural values is necessarily implied. Do adolescents from families with a history of early motherhood perceive a cultural valuing of early motherhood? If so, what meaning does it have for their future and their life choices?

#### Discussion and Professional Implications

The purpose of this study was to determine if a causal relationship exists between an adolescent female's perception of self-agency and adolescent motherhood; the variables of social status, race and the adolescent's relationship with her mother were explored to determine their causal role in development of relationships between the endogenous

variables of the model. In the study there was an attempt to test the validity of theoretically expressed causal relationships through collection of survey data from samples of both pregnant and never-pregnant adolescent females between the ages of thirteen and nineteen. The results suggest that a causal relationship between environmental characteristics, self-perceptions, perceptions of motherhood, and adolescent pregnancy exists. However, the data only moderately fit the model. Significance was achieved for most of the relationships indicating support for the model as constructed. Other aspects of these relationships are the result of other uncontrolled or unspecified variables.

The magnitude of the relationships between significant endogenous variables may have been influenced by the adequacy of concept measures. The measurement of self-perception as defined by self-esteem lacks true congruence with the concept of agency. As a self agent, the individual perceives the possession of personal power. Power in this respect refers to the perceived ability to control one's own life. The individual believes in the ability to fulfill personal goals and potentials as well as believing in the power to overcome perceived barriers. Self-esteem only tangentially measures this conception of individual power. The explanatory ability of the causal links between model concepts is, therefore, diminished. This measurement error represents the greatest weakness of the study. Yet, the results lead one to conclude that self-esteem must be included in the model

due to the explanatory power offered for the variables of race and social status.

The sample used in this research was large in comparison to that used in most adolescent motherhood studies. More importantly, the subjects in the sample represented diverse social backgrounds, both urban and rural, with a full range of social status characteristics. The sampling supports the nature and validity of the findings. Associations described in this research are consistent with those found in previous studies.

These results have implications for professional nursing practice. This study lends additional validity to previously identified characteristics of adolescents at risk for early motherhood. It also provides some support for viewing the adolescent through a constellation of social and individual characteristics to identify the greatest risk. Preventive services should be directed toward those individuals possessing a significant combination of characteristics.

Also, use of a screening device such as the Parenting Perceptions Instrument (Dormire, 1989) in clinical settings could facilitate identification of adolescents who value early motherhood. Administering the instrument in environments where nurses have access to the sexually active adolescent population, the family planning clinic for example, would aid in direction of services necessary to promote pre-conceptual and prenatal health. Adolescents who have demonstrated a value for early motherhood could

then receive instruction in optimal health services for positive perinatal outcomes in addition to birth control information.

These data imply that services for adolescent mothers would be most effective when focusing on early motherhood from the adolescent's perspective. The change in status gained through motherhood could serve as a focus for improving decision-making and parenting skill with adolescent mothers. Or, adolescents in communities with a high incidence of early motherhood could serve as role models for at-risk or pregnant adolescents with the same goals. Role model efforts could be directed toward providing a comprehensive view of the life changes accompanying motherhood and the related responsibilities. Community role models could also serve as facilitators in encouraging healthy behaviors for young mothers and their children.

Another perspective provided by these data is the gain in the mother-daughter relationship. Nursing care models would function optimally where the developing support between mother and daughter is utilized, minimizing the predominately held belief that the relationship is strained by early motherhood. A significant care perspective would use the improvements in mother-daughter relations to foster the adolescent's growth in her new role. The adolescent's mother could be supported in serving as a mentor.

#### Recommendations

For theory building to be meaningful, a variety of causal modeling procedures should be undertaken using the same population as that originally

used for testing the model. These procedure include theory trimming, testing of alternate models, and the inclusion of variables, originally lacking in the model to explain more variance.

Theory trimming involves deleting paths that are not statistically significant (Pedhazur, 1982). It is obvious that the path between social status and self-esteem could be deleted in future work. In addition, it might appear to be appropriate to delete the path between race and communication with mother. However, causal modeling experts recommend keeping paths that are not statistically significant if theory or previous research strongly support the relationship (Asher, 1987; Pedhazur, 1982). As noted, the relationship between these variables in adolescent motherhood have been proposed theoretically in the Human Agency Model and substantiated empirically (Lewis, 1966; Miller, McCoy, Olson, & Wallace, 1986; Shtarkshall, 1987; Walters, Walters, & McHenry, 1986).

Although the results of the study suggest a moderate fit of the adolescent data to the model, it cannot be concluded that the model represents the true causal processes. Alternate models of adolescent motherhood should be developed and tested in order to ascertain which model best represents the relationships between all variables involved in the phenomenon.

Finally, the identification of critical variables that might increase the explanatory power of the model should be a continuing effort to facilitate theory building (Asher, 1987). This effort should be balanced with attempts

to achieve parsimony, which is the goal of scientific explanation (Pedhazur, 1982). As evidenced in the results of testing the causal model testing (see Figure 4-1), additional variables need to be identified and included in the model because the residual variance is large. The associations suggested by the correlation analysis of these data may provide indicators for which variables to be included.

Further research might also use different measures of the model constructs, in particular the measure of self agency. A specific effort should be aimed at development of or application of a measure of power/agency. Such an instrument would be based in an existentialist philosophy. That is, the instrument would measure the dynamics of how powerful an individual feels in the given social environment; it would assess feelings of dependence versus independence of environmental constraints.

Future developmental efforts need also to be directed toward ongoing development of the Parenting Perceptions Instrument. Specifically, an entire project is indicated to assess the reliability and validity of the instrument to foster its use in the research arena.

Statistical enhancement of future research would be achieved through the application of more powerful analytic strategies such as the analysis of covariance structures as offered in LISREL (Joreskog & Sorbon, 1986). This statistical power might have proven to be a welcomed advantage in the current study.

Other research techniques that would enhance analysis of the theoretical relationships between model variables would be to first use a qualitative analysis approach. Such an research effort would aid in clarifying the meaning of motherhood to adolescents in the high risk populations. Sampling should not, however, be limited to people with specific characteristics such as poor and black individuals as has been done in previously cited research. Broader sampling would foster generalization of findings and promote understanding of the relationships between concepts.

A second step in future analysis of the phenomenon of adolescent motherhood would be a longitudinal study. In this approach a large sample of adolescents would be followed throughout their adolescent years with repeated measures of the model variables. Analysis could then determine if the model constructs and relationships hold true, particularly for those adolescents who value an early trajectory in motherhood as compared to those adolescents who do not hold similar values.

## APPENDIX A

### PARENTING PERCEPTIONS INSTRUMENT

This form lists various beliefs girls have about motherhood. Place an X under the response that best tells how much you agree with each sentence. In marking your answer, you should consider only your beliefs, not those of others.

	Strongly Agree	Agree	Disagree	Strongly Disagree	DO NOT Write In This Space
1. The best thing about being a mother is that it makes a woman happy.					
2. The worst thing about being a mother is not being able to go out					
3. As I see it, having a baby at my age will change my relationships with my friends					
4. I think girls my age have babies because they want to have someone to love					
5. The worst thing about being a mother at my age is that it will change my future plans					
6. I think having a baby now will bring me closer to my mother					
7. At my age, girls want to have babies in order to get away from a bad situation at home					
8. For me, having a baby at my present age will change my education or career plans					
9. The worst thing about being a mother at my age is that I don't know what to do with a baby					
10. I will have someone who needs and depends on me when I have a baby.					
11. It seems that girls my age have babies because they want to be loved					
12. When I have this baby it will make me grow up.					



APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

YOU

1. Age \_\_\_\_\_ 2. Date of birth \_\_\_\_\_

3. Education level: What is the highest grade of school that you have finished? (Circle the correct grade)

Grade School  
1 2 3 4 5 6 7 8

High School  
9 10 11 12

College  
13 14 15 16

4. Ethnic background

\_\_\_ 1. Asian

\_\_\_ 2. Black

\_\_\_ 3. Hispanic

\_\_\_ 4. Native American

\_\_\_ 5. White

\_\_\_ 6. Other (specify) \_\_\_\_\_

5. Religious preferences

\_\_\_ 1. Protestant (specify)

\_\_\_ 2. Catholic

\_\_\_ 3. Jewish

\_\_\_ 4. Other (specify)

\_\_\_ 5. None

6. Participation in religious activities

\_\_\_ 1. Inactive

\_\_\_ 2. Infrequent participation (1-2 times a year)

\_\_\_ 3. Occasional participation (about monthly)

\_\_\_ 4. Regular participation (weekly)

7. How many close friends would you say you have? (Close friends are those friends you talk to often and feel close enough to tell secrets to )

\_\_\_\_\_

8. Have you ever been pregnant before? (Circle one)

Yes

No

9. How many months pregnant are you now? (Circle one)

1 2 3 4 5 6 7 8 9

**MOTHER/WOMAN OF THE HOUSE**

10. How many years of education has your mother, or the adult woman you live with, had?

Grade School  
1 2 3 4 5 6 7 8

High School  
9 10 11 12

College  
13 14 15 16

\_\_\_\_\_ I don't know my mother/ there are no adult women in our house.

11. What is the job of your mother? \_\_\_\_\_

12. Describe her work duties \_\_\_\_\_

**FATHER/MAN OF THE HOUSE**

13. How many years of education has your father, or the adult man in your home, had?

Grade School  
1 2 3 4 5 6 7 8

High School  
9 10 11 12

College  
13 14 15 16

\_\_\_\_\_ I don't know my father/ there are no adult men in our house

14. What is you father's (or the man of the house) job?  
\_\_\_\_\_

15. Describe his work duties \_\_\_\_\_

**FAMILY**

16. Household: List the ages and relationship to you of each person living in your home. For example:

<u>Age</u>	<u>Relationship</u>
57	Grandmother
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PA

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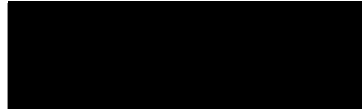
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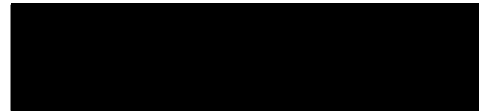
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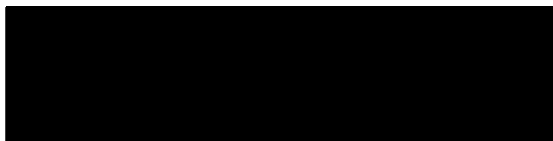
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