7-1-1989

Relationship Of Family Cohesion And Adaptability To Infant Caretaking Role Patterns Of Rural Black Grandmothers And Their Adolescent Daughters

Sonja Kerlen

Relationship of Family Cohesion and Adaptability to Infant Caretaking Role Patterns of Rural Black Grandmothers and Their Adolescent Daughters

by

Sonja Kerlen

A Thesis
Submitted to the Faculty of
Mississippi University for Women
in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Nursing
in the Division of Nursing
Mississippi University for Women

July 1989

Relationship of Family Cohesion and Adaptability to Infant Caretaking Role Patterns of Rural Black Grandmothers and Their Adolescent Daughters

by

Sonja Kerlen

Virginia Lee Cole DSN
Associate Professor of Nursing
Director of Thesis

Mary Patricia Curtis
Associate Professor of Nursing
Member of Committee

Deborahe Jackson Harris
Assistant Professor of Nursing
Member of Committee

Joyce Hunt
Director of the Graduate School

Acknowledgements

The researcher would like to express sincere appreciation to Dr. Virginia Cora, committee chairperson, for her invaluable assistance, guidance, and support throughout the completion of this study. The suggestions and input of the graduate committee members, Maripat Curtis and Deboraha Harris, are also greatly appreciated.

Those who provided research and technical support are also sincerely thanked: Lee Smith and Teresa Free, for their input regarding the conceptualization and design of this study; local health agencies, who provided names of families for this study; the adolescent mothers and their families, who gave of their time so that this study could be implemented; J. Martin Giesen, for providing statistical analysis of the data; and Phyllis McCorkle, for typing this paper.

A special thanks is extended to my wonderful family, Nel, Otto, and Michael Kerlen, for their continuing love and faithful support, especially when I needed it most. My brother, Michael, also is greatly thanked for the use of his computer.

Genuine appreciation is expressed to Marie Daly, Sharon DeNooyer, and Carolyn Newhof, for being friends on whom I

greatly depended and who never let me down. Thanks also goes to the staff of the Luke Society, the Cary Christian Health Center, and the members of the Mt. Buria Church for their support and patience with me while I was involved with this study.

Finally, and most of all, thanks is given to the ever faithful and loving God upon Whose strength I have depended. Without Him, it would have been impossible to complete this study.

Abstract

This descriptive study explored the relationship between family structure and infant caretaking role patterns in multigenerational rural Black families that included an adolescent mother, her infant, and the grandmother. The variables considered in relation to family structure were family cohesion and adaptability, which were conceptualized by Olson's (1983) Circumplex Model. Smith's (1983) model of family roles formed the basis for the conceptualization of role sharing behaviors of infant caretaking responsibilities.

Data were obtained using Olson's (1983) FACES III, measuring family cohesion and adaptability, and an Infant Caretaking Questionnaire. The sample included 19 adolescent mothers and grandmothers in their homes in a Southern rural county in Mississippi, up to 10 months after delivery.

The null hypothesis for this study was that there is no relationship between family cohesion and adaptability functions and role patterns in relation to infant caretaking responsibilities assumed rural Black adolescent mothers and grandmothers. Data were analyzed using chi-square analysis.

Although a trend toward a positive relationship between role sharing and balanced families was identified, no

significant relationship was found at the .05 level. Therefore, the null hypothesis was retained. Recommendations for future research included using a larger sample in both rural and urban settings and using a more comprehensive instrument for identifying role patterns.

Table of Contents

List of Tables

Chapter I

The Research Problem

This study investigated the impact of intergenerational family systems on the assumption of the maternal role by adolescent mothers. The primary focus of the research was determining the type of family structure necessary for the development of a supportive, interdependent relationship between the adolescent mother and her own mother with regard to primary infant caretaking responsibilities within an intergenerational family setting.

In this chapter, the problem is introduced along with a discussion of the significance of the problem for nursing. The conceptual models which provided the framework for this research will then be presented, followed by the assumptions upon which it is based. Operational and conceptual definitions of key terms are provided in conclusion.

Introduction to the Problem

The phenomenon of adolescent pregnancy is a national crisis which has been gaining increased attention the past few years on the part of health care providers, social workers, educators, and politicians. One million American teenagers and preteens become pregnant each year, thereby

crediting the United States with the highest rates of teenage pregnancy, childbirth, and abortions when compared to similar developed Western countries (Hardy, 1988). On an economic dimension, teen pregnancies are costly. In 1985, the Federal Government spent an estimated $16.65 billion in welfare, food stamps, and medicaid expenses for families with adolescent mothers (Hardy, 1988).

On a national level, teen pregnancies are costly for all races. Of the teens who become pregnant each year, 58% are White. However, because of the correlation between poverty and teen pregnancy rates, Black and Hispanic teens have disproportionately higher rates of teen pregnancy. Even though minority teens account for 27% of the adolescent population, they claim 40% of all adolescent births and 57% of births to unwed teenagers (Children's Defense Fund, 1988).

In 1980, within the Black community, 57% of all live births were to mothers between the ages of 15 and 17 years old (Height, 1986). In 1985, the national statistics were somewhat more encouraging. The percentage of all live births to Black women less than 20 years old was down to 21% (as compared to 11% for Whites) (Height, 1986).

In Mississippi, according to the 1987 Vital Statistics report, the live birth rate of 26% for 15- to 19-year-old Black females and 13% for White females, is slightly higher than the national average. In some rural counties in

Mississippi, however, the live birth rate for Black teenagers was 40% in 1987, which is an increase of the 1986 rate of 38%. The incidence of adolescent motherhood clearly is not diminishing (Mississippi Department of Health, 1987).

Of the teenagers who become pregnant, about 90% live at home with a parent or close relative during their pregnancy, and 77% of these young women continue to do so one year after delivery (Furstenberg, 1980). The fact that these teenagers are living at home indicates that the problem of adolescent pregnancy affects not only the adolescent individuals, but their families as well.

In some families, early parenthood creates an immediate crisis for teenage parents and their families, and often initiates a chain of events which may result in long-term disadvantages for the young parents and their offspring (Furstenberg & Crawford, 1978). Some of these disadvantages include attenuated educational attainment, diminished earning power, and greater family size (Stevens, 1984). The support and assistance provided the young parent by a network of kin and friends help offset some of the negative consequences (Stevens, 1984).

Within the family itself, restructuring of the roles of each family member often occurs when families attempt to determine who is to assume the role of mother within the family after delivery (Bryan-Logan & Dancy, 1974). The mother of the adolescent daughter often provides the most

consistent support for the young mother and may become partially responsible for the rearing of the adolescent individual's child (Smith, 1975). However, the grandmother usually sees her care-giving role as temporary (Facteau, Flaherty, & Garver, 1987).

Smith (1983) and Poole and Hoffman (1981) found similarities in the role patterns that were exhibited by families incorporating an adolescent mother into their home. The most representative were the families that shared responsibilities and functioned interdependently with each other. Even though the adolescent mother often emerged as the primary care-giver, mutual involvement in infant care between the grandmother and the adolescent daughter occurred as the grandmothers supplemented maternal care (Facteau et al., 1987).

Recently, interest has been growing on the part of researchers to understand the interaction of families, especially what enables a family to function at optimal levels in the face of situational and developmental stress. Russell (1980) found that families of origin may respond adaptively to the crisis of adolescent pregnancy. Olson (1986) ascertained that adaptability and cohesiveness of families play a role in determining the functioning of the family.

Research studies supported the belief that the families of adolescent mothers, in addition to the adolescent mother

herself, are in need of intervention and support (Stevens, 1984). The more information available regarding the functioning of families in relation to adolescent motherhood, the more appropriate and specific will be the interventions that seek to address the problem of teen pregnancy. This study investigated the relationship between family structure and primary infant caretaking patterns within families of adolescent mothers.

Significance of the Problem

The incidence of teenage pregnancy and childbearing provides numerous implications and opportunities for the nurse clinician. Increasing knowledge within this area of nursing science has an impact on the domains of both practice and research.

Practice. In clinical practice, the nurse clinician is in the unique position of having the knowledge, skills, and opportunity to provide services directed toward the families, and particularly the mothers, of the teenage mother. In following the phases of the nursing process, the nurse clinician can assess the adolescent mother's situation more accurately by also obtaining an understanding of the different roles that are being assumed by the various family members. This enables the clinician to plan family interventions for adolescent mothers and their families according to the type of family structure present within that family, as well as according to the actual distribution of infant

caretaking responsibilities. Therefore, by using knowledge of the family structure and role patterns, the clinician's assessment and plans for intervention will be more individualized and goal-directed for that particular family.

In addition to clinical practice, nurse clinicians often are involved with the development of adolescent parenting programs. By understanding that teen pregnancy involves the entire family and the infant's father as well as the adolescent mother, clinicians can direct their efforts to include the needs of these other individuals. At the present time a sparsity of programs are geared toward family members other than the pregnant young woman.

Research. A significant deficiency exists in the literature with regard to infant caretaking patterns and family structure. With the rise in adolescent pregnancy and subsequent negative consequences for the adolescent, her family, and the nation as a whole, the testing of conceptual models and the addition of relevant empirical findings geared towards increasing the health professionals understanding of this problem is greatly needed.

Conceptual Framework

The conceptual framework for this study was derived from two models depicting family structure and role patterns. The first model, the Circumplex Model of Marital and Family Systems, was developed by Olson, Russell, and Sprenkle (Russell, 1979) and provided the framework for the

discussion of family cohesion and adaptability. A nursing conceptual model of families incorporating an adolescent mother and child into the household, developed by Smith (1983), formed the basis for identifying family role patterns.

Family structure. The Circumplex Model of Marital and Family Systems was developed by Olson et al. (1979) in an attempt to provide a framework in which to define family structure for the purposes of research and clinical practice. In reviewing the literature on family theory and after many years of research, Olson et al. found three central dimensions of family behavior upon which to base their work. These dimensions are cohesion, adaptability, and communication. Family cohesion was defined as "the emotional bonding that family members have toward one another" (Olson et al., 1985, p. 3). Family adaptability had to do with the extent to which the family system is flexible and able to change. Communication was the mechanism for the facilitation of the other two dimensions.

The hypothesis of the Circumplex model was families that balance the extremes of adaptability and cohesion function better than families on either extreme. With adaptability, families function at an optimal level when they maintain a balance between rigidity (no change), and chaos (erratic change). With cohesion, a balance is found between the degree of connectedness and the degree of

individuality and separateness (Russell, 1979). Characteristics of the particular family under consideration were determined by their placement on a circumplex matrix (see Appendix A) in relation to answers obtained on a 20-item self-report instrument (see Appendix B).

In this study, the families completed the self-report questionnaire, after which their responses were plotted on the circumplex matrix. Depending upon the placement of their scores on the matrix, the families were considered balanced or not balanced. The Circumplex model provided a framework with which to classify the families of this sample.

Role pattern. The conceptual model of families developed by Smith (1983) formed the basis for the role pattern portion of the conceptual framework for this study. Using a developmental framework of family life cycle theory, Smith described three typologies of families that exist when attempting to incorporate the adolescent mother and her child into the household. These typologies are role sharing, role blocking, and role binding.

Role sharing, or sharing of acts that comprise the maternal role, is characterized by collaboration and interdependence among family members in relation to child care needs. According to Smith (1983), the role sharing pattern is the most representative pattern seen in multigenerational families with adolescent mothers.

Free (1988), in her follow-up study of Smith's model, determined that two types of role sharing behaviors are possible: "collaborative-nurturant" and "turn-takers." In the collaborative-nurturant pattern, the family not only shares the responsibilities of infant caretaking, but also takes on the role of coach or teacher for the adolescent mother. In the turn-taker pattern, the family assists with child-care tasks, but only while the adolescent mother herself is not present. As soon as she returns, the adolescent mother assumes the total child-care role.

The other two typologies are role binding and role blocking, in which either of the two parties assumes total caretaking responsibilities at the exclusion of the other. In role binding situations, the adolescent mother assumes the total caretaking responsibilities for the infant. Free (1988) added to this typology by noting two different patterns of role-binders: those that assume the role by choice, and those who assume the role by default. The role-binder by choice typifies the adolescent mother who uses her pregnancy and motherhood as an escape from school or social situations which she never enjoyed. This female enjoys the role of mother and prefers to stay home with her baby. Role binders by default in actuality want to return to school but do not have anyone at home to take care of the infant. In this instance, the young woman feels trapped by infant

caretaking responsibilities and is very unhappy with this role.

The third typology, which is seen most infrequently, is the role blocking pattern, in which the grandmother assumes the primary maternal role and does not allow the adolescent mother any responsibility. This occurs, according to Smith's model, when the grandmother does not think that the young woman is capable of caring for the child, or because the grandmother herself covets the job of being a mother once again (Smith, 1983).

In this study, the adolescent mother and her mother were given the opportunity to discuss between themselves the division of labor of infant caretaking responsibilities which was occurring within their family setting. By responding to a self-report questionnaire in terms of which party did a specific caretaking task all of the time, most of the time, some of the time, a little of the time, and none of the time, the adolescent mother and her grandmother revealed which role pattern was evident within their family setting.

The combination of the Circumplex model and Smith's model of families with adolescent mothers provided a rich theoretical base for families of teenage parents. The assessment of the family structure in relation to the infant caretaking roles of the adolescent mother and her grandmother provided the focus for this study.

Assumptions

The assumptions which formed the basis for this study were as follows:

The pregnancy and subsequent motherhood of an adolescent female creates a developmental transition for the individual and her family.

The family of an adolescent mother plays a significant role in the life of the adolescent individual as well as her child; this role may be either positive or negative.

The structure of the family system has an impact on the way it functions and on the roles assumed by each family member.

Statement of the Problem

The purpose of this study was to examine the relationship between family cohesion and adaptability and role sharing patterns of infant caretaking tasks in multigenerational rural Black families. Therefore, the research problem under investigation in this study was: Is there a relationship between family cohesion and adaptability and role sharing patterns of infant caretaking tasks among rural Black grandmothers and their adolescent daughters?

Hypotheses

The hypotheses of this study were as follows:

Ha_1: Rural Black families having balanced dimensions of cohesion and adaptability will manifest the pattern of

role sharing in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother.

Ha_2: Rural Black families having extreme dimensions of cohesion or adaptability will manifest patterns of role blocking or role binding in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother.

Definition of Terms

For the purpose of this study, conceptual and operational definitions of key terms were as follows:

Family. Social systems composed of multiple generations of Black family members that include an adolescent mother, her newborn, and the infant's grandmother, who reside in a Southern rural area and are associated by birth, marriage, adoption, or mutual consent, being committed to each other over time, having common properties, rights, and responsibilities, and living in the same household.

Cohesion. The degree of emotional bonding experienced between family members in relation to the degree of autonomy experienced by individuals (Russell, 1980). A family is considered balanced between the extreme dimensions of disengagement (high personal autonomy) and enmeshment (little personal autonomy) if their scores on the FACES III fall within the center circle of the Circumplex matrix (Olson, 1986) (see Appendices A & B).

Adaptability. The ability of the family to change structure, role relationships, and relationship rules when confronted with situational and developmental stress (Russell, 1980). A family is considered balanced between the extreme dimensions of chaos (extremely high levels of adaptability) and rigidity (very low levels of adaptability) if their scores on the FACES III fall within the center of the Circumplex matrix (Olson, 1986).

Grandmother. A Black female of any age who is the mother of a postpartal adolescent daughter and who lives in a rural county in west central Mississippi.

Adolescent mother. A Black female aged 14 to 19 years, who is within 12 months postpartal and who lives at home with her primary family including her mother in a rural county in west central Mississippi.

Infant caretaking role patterns. The pattern established within the family regarding the acquisition of infant caretaking responsibilities, such as feeding, bathing, clothing, nurturing, and managing by either the adolescent mother herself, or the infant's grandmother during the first 12 months of the infant's life (Smith, 1983). The determination of who performs which of 12 tasks was measured by the joint response of the adolescent daughter and her mother to the Mother-Grandmother Infant Caretaking Questionnaire (see Appendix C).

Role sharing. Responsibilities for raising the adolescent daughter's baby are shared among family members with each party having control over certain areas of child care. Tasks are either shared by family members in which each person does certain tasks 50% of the time; or the tasks to be performed are divided between two persons with one person doing half of the tasks most all of the time, and the other individual doing the other tasks most or all of the time. In this study, this is evidenced by responses to the questionnaire that either 8 or more of the 12 tasks are shared by each party 50% of the time, or 5 to 7 of the 12 tasks are performed 75 to 100% of the time by the grandmother and the other 5 to 7 tasks are performed 75 to 100% of the time by the adolescent mother.

Role blocking. Responsibilities for raising the baby are assumed by a family member other than the adolescent mother either because she refuses or neglects to assume the maternal role herself. The grandmother and the adolescent daughter jointly respond to the questionnaire by indicating that the grandmother fulfills a majority of the tasks, 8 or more, 75 to 100% of the time.

Role binding. Responsibilities of the maternal role are assume by the adolescent daughter with minimal or no assistance from family members. The grandmother and the adolescent daughter jointly respond to the questionnaire by

indicating that the adolescent mother fulfills a majority of the tasks, 8 or more, 75 to 100% of the time.

Summary

This chapter has provided an introduction to the research question "Is there a relationship between family cohesion and adaptability and infant caretaking role patterns of rural Black grandmothers and their adolescent daughters." The significance of this problem was discussed, as well as the hypotheses for this research. The conceptual framework, assumptions, and definition of terms were also provided.

In Chapter II, current research pertaining to family functioning and role patterns is reviewed and its relevance to families with adolescent mothers is discussed. Chapter III provides a detailed description of the design of this study, revealing how the research was operationalized. Chapter IV provides a description of the findings of this research and the results of data analysis. The interpretation of these findings, including the implications for nursing and recommendations for future research, is presented in Chapter V.

Chapter II

Review of the Literature

The literature is replete with research that has investigated various dimensions of adolescent pregnancy and motherhood. Researchers have analyzed extensively the effects of pregnancy on the adolescent's opportunities for future development, including educational, employment, and social prospects (Bacon, 1974; Furstenberg, 1980), as well as the coping mechanisms required for successful acquisition of the maternal role (Colletta, Hadler, & Gregg, 1981). Researchers have also investigated the general effects of kinship networks and social support systems within families on various psychological and emotional characteristics, such as self-esteem and role development (Hofferth, 1984; Melito, 1985; Wilson, 1984).

Only six studies have addressed aspects of family functioning and role patterns in relation to families with adolescent daughters. These studies are reviewed in this chapter.

Family Structure

In a longitudinal research study by Furstenberg and Crawford (1978), data were obtained from interviews of 404

adolescent mothers and 350 of their grandmothers in Baltimore, Maryland. The interviews took place while the teen was pregnant as well as 1, 3, and 5 years after delivery, in order to determine the long range effect of family support on adolescent motherhood. The sample, 87% Black, was made of primarily lower and working class individuals with family incomes of $3,000 to $4,000 annually. Fifty percent of the adolescent families were two-parent households, while 40% were headed solely by the mother of the teen parent.

In analyzing their data, Furstenberg and Crawford (1978) found that provision of family support occurred more frequently when the adolescent mother remained at home with her primary family after delivery. Adequate support significantly altered the opportunities of the adolescent mother by enhancing her prospects of educational achievement and economic advancement, as well as possibly contributing to the cognitive development of her child. The authors suggested that programs for adolescent mothers should build upon the strengths inherent in these families and should provide assistance to these families as well as to the young mother.

In their recommendations for future research, Furstenberg and Crawford (1978) stressed that arrangements which are immediately functional for the young mother and her child are not always adaptive later on. Therefore, they

suggested that the impact of early childbearing on the family unit be investigated to a greater extent.

Using a multi-trait, multi-method approach, Russell (1979) studied 31 family triads including daughters between the ages of 14 to 17 years, in order to explore the relationship between family functioning and family cohesion and adaptability. Participation in a structured family interaction game (SIMFAM) and the completion of questionnaires measuring the variables of cohesion and adaptability provided the data necessary for her study. Factor analysis and correlational analysis of the data supported her hypothesis that high level family functioning was correlated with moderate family cohesion and adaptability, whereas low family functioning was associated with extreme dimensions on cohesion and adaptability.

Russell's (1979) study is pertinent to this research study because it addressed the issue of family functioning in relation to adolescent mothers. However, no conclusions were made relevant to the effect of pregnancy and subsequent childrearing on the family, which was the focus of this study.

Role Patterns

In a qualitative research study by Facteau, Flaherty, and Garver (1987), the role and extent of involvement of 19 Black grandmothers in the lives of their adolescent daughters' infants were examined. Open-ended interviews

with the grandmothers were conducted a few days after birth, at 2 weeks postpartum, and 3 months postpartum to determine which tasks were most often assumed by the grandmother. These responsibilities were described as managing, care-taking, coaching, assessing, nurturing, assigning, and patrolling. The authors found that even though the grandmothers were important persons in the lives of the adolescent mothers and their infants, the adolescent mothers were still the primary care-givers. Most grandmothers expected their daughter to assume the majority of the infant care and saw their own responsibilities as temporary. Although the role of grandmothers in the lives of their adolescent daughters was examined, the effect of family functioning upon the determination of which family member assumed the primary maternal role after delivery was not addressed.

Stevens (1984) researched the question of whether a relationship exists between the childrearing abilities of Black grandmothers and the abilities their own teenage daughters acquire in child care. A total of 101 low income Southeastern Black families consisting of 55 teenage mothers (aged 15 to 20 years) who had infants that were 13 to 30 months old, and 46 teenagers who were not pregnant nor parents were interviewed. A total of 75 to 87% of the grandmothers of both teenage groups respectively also were interviewed. Two questionnaires about child development

were administered to the grandmothers and the teenagers in their homes.

Stevens' (1984) study showed that when Black teenagers continue to live at home, they benefited from having available to them others who were more knowledgeable about child development and who modeled a more responsive parenting style. These teens were found to be more likely to consult their mothers for help with childrearing problems, even though they would consult other sources for advice with difficult personal problems. Grandmothers appeared to provide significant support and information when teen parents encountered problems and are viewed by teens as a potent resource for information. Stevens (1984) believed that in the three generational households where the presence of an infant provides an opportunity for learning about infants, significant information about parenting is acquired also. A skilled grandmother facilitates the socialization process for a young mother. A less skillful one may either inhibit this process or support the development of poor parenting strategies.

Sharing of infant care responsibilities by family members was studied by Smith (1983) in an inductive qualitative factor isolating design using grounded theory. Data were collected through field methods of intensive interviewing and participant observation in the homes of 18 families in St. Louis, Missouri. The families included an

adolescent mother and her child between the ages of 4 and 14 months and represented a variety of economic and racial backgrounds. Analysis of the data by the constant comparative method led to the identification of three types of role patterns exhibited by the families: role blocking, role binding, and role sharing. Smith did not identify what effect family structure would have on role pattern behaviors in these families, but in her recommendations for future research suggested that this phenomenon be explored.

Free, in her 1988 follow-up study of Smith's work, investigated the relationship between infant caretaking role patterns and adolescent mother-infant interactions. A Baby's Care Inventory for Adolescent Mothers was administered to 60 Black low income urban adolescent mothers of infants between the ages of 6 and 12 months in Memphis, Tennessee. The purpose was to ascertain which baby care tasks were performed primarily by the adolescent mother, her mother, and which tasks were shared. The responses to this questionnaire determined the role pattern evident in that particular family: role sharing, role binding, and role blocking.

Free (1988) then observed the mothers interacting with their infants and recorded these interactions on the North Carolina Nursing Child Assessement Training (NC-NCAST) scale which measured the behaviors of the adolescent mothers with regard to infant feeding, teaching situations, and recording

sleep/wake activities. Findings revealed a positive difference in the interactions of the role binding adolescent mothers with their infants in comparison with the role blockers and role sharers. The role binders consistently achieved the highest scores of maternal-child interaction on the NCAST scale, especially in the emotional-nurturant and feeding/teaching tasks. Of the role binders, 33% of the adolescent mothers were not back in school, and, therefore, had more time with the baby. They were more sensitive and responsive to the baby's cues. In comparison, the role sharers had the lowest scores on the NCAST scale. Ninety four percent of these teenagers were back in school, and, therefore, had less time with their infants.

Free (1988) suggested that although the role sharers scored lowest on the NCAST scale, the adolescent herself was most often in a healthier situation since she was continuing her development as a young woman by furthering her education. The role binders, although they interacted well with their infants, were at a greater risk for attenuated educational and employment achievements. Her suggestion for future research was to further analyze the long-term effects of role patterns on the adolescent's development as well as upon the infant's development.

Summary

In summary, a review of the literature addressed the effect of family support on the coping mechanisms and

development of the adolescent mother (Furstenberg & Crawford, 1978), and investigated the different types of family structure that prove to be more beneficial for high family functioning (Russell, 1979). The literature also provided various perspectives on the role of families when confronted with an adolescent pregnancy in terms of the role of the grandmother (Facteau, Flaherty, & Garver, 1987; Stevens, 1984), the types of role patterns exhibited by the adolescent mother and her mother (Smith, 1983), and the effect of the different role patterns on mother-infant interaction (Free, 1988). The relationship of these concepts, family structure and role patterns, with each other has not been considered with a population of adolescent mothers and their families and therefore was the focus of this study.

Chapter III

Design of the Study

The purpose of this study was to examine the relationship between family cohesion and adaptability and role sharing patterns of infant caretaking responsibilities among rural Black grandmothers and their adolescent daughters. The research design used in this study was a descriptive correlational design. The variables of interest in this study were family cohesion and adaptability, and infant caretaking role patterns of grandmothers and their adolescent daughters in Southern rural settings.

In Chapter III, the design of this study is described, followed by the hypotheses for testing variables. Next, the setting, population, and sample of this study are described in detail. Thirdly, the method of data collection and data analysis is presented. In conclusion, limitations to this study are reviewed.

Design of the Study

A descriptive correlational design was chosen for this research study which sought to examine the relationship between the variables of family cohesion and adaptability and role patterns. Correlational research describes the

relationship among variables but does not infer a cause-and-effect relationship (Polit & Hungler, 1987). When this type of research is used, the variables are not manipulated, nor is random assignment employed. Instead, the phenomenon that exists is described. Thus, this design is appropriate for this study.

The variables of interest in this study were family cohesion and adaptability and the role patterns established as measured by the FACES III and the Infant Caretaking Questionnaire. Controlled variables included the ages of infant and mother, race, income of family, and location. Intervening variables may have included honesty, educational level, family size, and number of previous pregnancies of the adolescent.

Hypotheses

The alternative and null hypotheses of this study were as follows:

Ha_1: Rural Black families having balanced dimensions of cohesion and adaptability will manifest the pattern of role sharing in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother.

Ha_2: Rural Black families having extreme dimensions of cohesion or adaptability will manifest patterns of role blocking or role binding in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother.

Ho: No relationship exists between family cohesion and adaptability functions and role patterns in relation to infant caretaking responsibilities assumed by the rural Black adolescent mother and grandmother.

Setting, Population, and Sample

The setting for this research study was a rural county in west central Mississippi, which has a total population of 7,964 persons. This county is similar to many other counties in the South where work is scarce and resources are limited. With annual per capita incomes of $6,557, 37% of all families live below the poverty level, as compared to 19% for the State of Mississippi (Bureau of the Census, 1980).

The Black population accounts for 66% of the population of this county, compared to 34% of the overall population for the State of Mississippi. Forty-three percent of the population is under the age of 20 years. Of all persons between the ages of 18 and 24 years, only 52% are high school graduates (Bureau of the Census, 1980).

This county had a live birth rate for Black adolescent females of 40% which was significantly higher than the state rate (26%) and the national rate (21%). The live birth rate for White adolescents was 11% in the county and 17% in the state (Mississippi Department of Health, 1987).

The population of this research study was Southern Black families residing in this rural county. The sample

was obtained from a list of names of adolescent mothers with infants less than or equal to 12 months old, acquired from rural health departments, local physicians' offices, and a private, nonprofit health center. Identified individuals and their families were contacted by phone or home visit until a sample of 19 was acquired. A sample of convenience was used because all eligible subjects had to be contacted in order to obtain a sample size large enough to support statistical analyses.

Methods of Data Collection

Methods of data collection include a consideration of the instrumentation and the procedure utilized in the research design. This section addresses these aspects.

Instrumentation. Two data collection instruments were used in this study. The first instrument, a self-report inventory entitled Family Adaptability and Cohesion Evaluation Scale (FACES III), developed by Olson (1983), was reported to have high levels of reliability, validity, and clinical utility (see Appendix B). Internal consistency reliability was established by Olson using Cronbach alpha resulting in $r = 0.77$ for cohesion and $r = 0.62$ for adaptability, with a total $r = 0.68$. Evidence for face and content validity was reported as being very good. Correlation between scales was low with $r = 0.03$.

The instrument was designed to be used with a variety of family structures such as nuclear, single parent, and

blended families (Olson, 1986). As with other self-report instruments, some discrepancy was noted between reports of family members, especially in families with adolescents. This factor was taken into consideration when analyzing the data.

Utilizing a Likert scale format, FACES III is composed of 20 statements which addressed various aspects of family interactions. The 10 items pertaining to the cohesion dimension addressed areas such as emotional bonding, supportiveness, family boundaries, time and friends, and interest in recreation. The other 10 items, which were related to the dimension of adaptability, included concepts such as leadership, control, discipline, roles, and rules (Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1985). Respondents decided whether the statement applied to their family almost always, frequently, sometimes, once in awhile, or almost never, and placed the appropriate corresponding number next to that statement. The scores were then added up, with the responses to the odd statements indicating the cohesion score, and the even responses indicating the adaptability score. These scores were then plotted on the Circumplex matrix to ascertain the degree of cohesion and adaptability present in the family.

In this study, the FACES III questionnaire was completed by the adolescent mother and her mother separately, and the scores were then placed on the

Circumplex matrix to determine the structure of that particular family according to the adolescent mother and her mother. The perspective of both parties was taken into consideration during data analysis. Families were considered balanced if the adolescent mother and grandmother had agreement between them that their families were balanced. Families were considered nonbalanced if both the adolescent mother and grandmother scored their families' as not balanced, or if they did not have agreement between the two, with one individual reporting the family as balanced while the other responding as not balanced.

The second instrument was an investigator developed scale designed to measure infant caretaking role patterns of the adolescent daughter and her mother (see Appendix C). This 12-item self-report questionnaire used a 5-point Likert scale format in which the respondents determined the amount of the time each individual performed certain tasks, whether it was none of the time (0%), a little of the time (25%), some of the time (50%), most of the time (75%), or all of the time (100%).

The 12 tasks addressed three major categories of infant caretaking responsibilities: Direct caretaking, nurturing, and managing (Facteau et al., 1987). Direct caretaking responsibilities consisted of tasks such as feeding, clothing, bathing, and changing the baby's diaper (Items 1, 2, 5, 7, 10). Nurturing tasks included holding and

cuddling, and talking, singing, and playing with the baby (Items 3, 9). Tasks that were considered to be related to managing were making the final decision about what the baby needs, making sure the baby is kept safe, making sure all the baby's supplies are in the house and keeping them in place, and making sure the baby is taken to the health clinic when needed (Items 4, 6, 8, 11, 12).

The questionnaire was designed to be completed jointly by the adolescent mother and her mother, with the two parties discussing between themselves which tasks are primarily performed by the mother, which are performed by the grandmother, and which are shared. The two parties were instructed to place an "M" for mother and a "G" for grandmother under the percentage of the time each party fulfills each particular task, making sure that the percentage combination (0%, 25%, 50%, 75%, and 100%) added up to 100%.

In this study, families were considered to exhibit the role sharing pattern if either 8 or more of the 12 tasks were shared by each party 50% of the time, or 5 to 7 of the 12 tasks were performed 75% to 100% of the time by the grandmother and the other 5 to 7 tasks were performed 75 to 100% of the time by the adolescent daughter. The role blocking pattern was present if the grandmother performed a majority of the tasks, 8 or more, 75% to 100% of the time. The role binding pattern was present if the adolescent

mother performed a majority of the tasks 75 to 100% of the time.

Face validity for this instrument was established after review by 12 health professionals: 2 maternal child specialists, 2 nurse researchers, 3 nurse educators, 4 clinic staff members, and 1 statistician. Reliability was not established for this instrument due to time considerations.

Procedure. Potential subjects were contacted, by telephone or a home visit or both, within 12 months after the delivery of the adolescents' infants. The purpose of the study was explained and, if they were willing to participate, joint written consent was obtained from the grandmother and her adolescent daughter (see Appendix D). Demographic data profiles were obtained from the grandmother and adolescent mother at that time (see Appendix E). The adolescent mother and her mother then completed the FACES III separately. Finally, the Infant Caretaking Questionnaire was answered jointly, with the two parties conferring together on their responses.

In order to protect the rights of human research subjects, approval from the Mississippi University for Women's Institutional Review Board was obtained (see Appendix F). Confidentiality was maintained throughout the study and the participants were informed that their

voluntary participation in the study would not have any effect on the health care they were currently receiving.

Methods of Data Analysis

In order to determine the relationship between family structure (balanced or nonbalanced) with the three role patterns, chi-square analysis was used. This nonparametric test was chosen because it is appropriate for assessing relationships between two nominal level variables and can be used with small sample sizes (Polit & Hungler, 1987). A significance level of .05 was considered applicable when testing the null hypothesis. According to Polit and Hungler (1987), a 95% confidence interval is generally considered sufficient for research in the social sciences.

As additional information, demographic data were used to describe the sample. A *t* test was used to compare demographic characteristics between balanced and nonbalanced families, while one-way analysis of variance was used to compare the characteristics between the three different role patterns identified. These statistical tests were used because the *t* test is appropriate for use in analyzing the difference between two means, while the ANOVA is appropriate for use in comparing the variability between and within groups (Polit & Hungler, 1987).

Limitations

When considering the design of this study, five limitations were found to exist. These limitations related to time, geographical, and environmental considerations.

The first limitation was that data were collected from the adolescent daughter and her mother during only one isolated moment in time. All the findings for this research were based on one interaction between the nurse researcher and the families. However, all families may change markedly over time. Therefore, a snapshot view at any one point in time yields an incomplete picture of the true family situation (Furstenberg, 1978). Collecting data over a longer period of time may have yielded richer data.

Secondly, the data were collected during the period between the infant's delivery and 10 months postpartum. If responses to the two questionnaires were obtained during the first 3 months of the infant's life before the mother returned to school, all the adolescent subjects would have been similar in postpartal phases which would have provided a more homogenous developmental grouping. However, because of time consideration, each subject was not reached during those initial 3 months after delivery. The factor of whether the adolescent mother spent most of her time at home or away from home played a significant role in the differences in caretaking patterns between mother and grandmother, and was an important limitation to this study.

Attempts to reach both the adolescent mother and the grandmother at home at the same time also proved to be a limitation to this study. Many of the participants did not have phones, so arranging and following through with scheduled meeting times was quite difficult.

Using Olson's (1985) FACES III on only two members of a particular family was another limitation to this study. In order to get the most accurate picture of family structure, Olson recommended that as many family members as possible complete this instrument. However, the scale's validity is considered questionable only when answered by just one family member (Olson et al., 1985). During the data collection for this research, responses to the FACES III were obtained consistently from the grandmother and her daughter, thereby at least getting the perspective of the family from more than one member alone.

The small sample size was the final limitation to this study. Because of the desire to study families living in rural areas, the participants were selected only from a specific geographical area with a total population of 8,000 within a 1 1/2-hour driving radius. Similarly, a sample of convenience had to be used in order to even obtain the sample size that was finally selected. This proved to be a major limitation to the study.

Summary

This chapter has described the research design for the study which explored the relationship of family functioning and infant caretaking role patterns in multigenerational rural Black families that have incorporated an adolescent mother and her child into their household. The methods of data collection and data analysis were described. In conclusion, limitations of this study were discussed. The findings of this study are discussed in Chapter IV.

Chapter IV

The Findings

The research problem under investigation in this study was: Is there a relationship between family cohesion and adaptability and role sharing patterns of infant caretaking tasks among rural Black grandmothers and their adolescent daughters?

The findings of the study are identified in this chapter according to variables. First, a demographic profile of the participants in this study is presented. The adolescent mothers and their infants, as well as the grandmothers and general family characteristics, are described. The results of data analysis then are outlined according to family structure and role pattern. Finally, a statement is made regarding the acceptance or rejection of the null or alternative hypotheses.

Description of the Sample

Demographic characteristics of the participants of this study are discussed in this section. Raw data for each family is presented in Appendix G.

Adolescent Mother and Infant

The subjects for this study consisted of 19 Black female mothers between the ages of 14 and 19 years, who lived in a west central Mississippi county. A majority of the mothers, 47%, were 18 years old while 37% of the mothers were 17 years old or less. Fifty-eight percent of the mothers were presently in school in grades 7 through the first year of college. Of the 19 teenagers, 47% were in the 10th grade or below when they became pregnant with this baby, while 21% of the girls had already graduated from high school and 16% of whom were in their first year of college. The majority of all the teenagers, 73%, had plans to return to school or continue their education.

The infants of these adolescent mothers ranged in age for 2 weeks to 10 months with a median age of 4 months. For 63% of the teen mothers, this baby was their first and only child. Of the other mothers, 32% had one other child ranging in ages form 12 months to 24 months, and one mother, age 19, had three children altogether (her youngest children being a set of twins at 7 months old and her other child being 2 years of age).

The girls reported being with their infant either 16 hours per day if in school, or 24 hours per day if not in school. Of the teens that were not in school, none of them were working. All of the adolescent mothers were single,

and all reported going to a doctor or health clinic during their pregnancy.

Grandmothers

The 19 grandmothers in this study were between 35 and 59 years old, except for one family in which the grandmother was not longer living, and the great-grandmother (aged 83 years old) assumed the role of the grandmother. The median age of the grandmothers was 43 years old.

A majority of the grandmothers, 74%, had 10 or fewer years of formal education (with 8 of these women having 8 or fewer years). Five of the 19 grandmothers had 11th or 12th grade education. A majority of the grandmothers were single (63%) and did not work outside of the home (58%). The grandmothers reported spending between 5 and 24 hours a day at home with the adolescent mother's infant, with a mean of 18.2 hours.

The total number of children these older women had ranged from 3 to 16, with a median of 6 children. The number of children still living at home ranged from 0 to 10 with a majority of the women having 4 children at home. The age of the grandmothers' youngest child ranged from 3 to 18 years old, with a mean age of 11.8 years.

Total Family

The total family size of the adolescent mothers and grandmothers ranged from 3 to 14 family members with a

median of 7 individuals. Of the families, 68% had family incomes of $500 to $1,000 per month, while 26% had incomes of less than $500 per month, and one family had an income of $1,000-$2,000 per month. None of the families reported incomes of greater than $2,000 per month.

Family Structure

Analysis of the scores of the adolescent mothers with regard to family cohesion and adaptability, after placement of their scores on the Circumplex Matrix (Olson, 1985), revealed that 12 out of 19 adolescent mothers, 63%, believed that their families were balanced. From the perspective of the grandmothers, 13 thought that their families were balanced (68%).

In order to arrive at an overall family analysis, the scores of the adolescent mother and grandmother were paired according to a priori criteria (see Chapter III, p. 29). Of the 19 families, 10 pairs of adolescent mothers and grandmothers (53%) were considered balanced. This group was labeled Group I. The other 9 families (47%) were considered nonbalanced and were labeled Group II. Of these 9 families, four pairs (21%) had both mother and grandmother scoring their families as not balanced, and five pairs (26%) did not have agreement between the two.

Role Pattern

Before addressing the role pattern grouping of the families, an analysis of the infant caretaking instrument is necessary. Table 1 reveals the number of times each particular task was performed by the adolescent mothers either none, a little, some, most, or all of the time.

After collating the 12 items into three major categories (Facteau et al., 1987), direct caretaking, nurturing, and managing, the following analyses were made. Direct caretaking tasks were done by a majority of the adolescent mothers 75 to 100% of the time, or they were shared between the grandmother and the adolescent mother 50% of the time. Nurturing tasks primarily were shared between the two parties, but never done 100% of the time by the adolescent mother alone. Managing tasks either were shared by the adolescent mother and grandmother or were done by the adolescent mother 75 or 100% of the time.

According to Smith (1983), families with adolescent mothers could be classified into three major groups: role sharing, role binding, or role blocking. Analysis of the data, however, revealed different classifications. Only 11 families (58%) fit into the original patterns according to the a priori criteria (see Chapter III, p. 30). Six of the families (32%) exhibited the role sharing pattern, and five of the families (26%) were role binding. None of the families exhibited the role blocking pattern.

Table 1

Summary of Adolescent Mother-Grandmother Infant Caretaking Tasks

	All (100%)	Most (75%)	Some (50%)	A Little (25%)	None (0%)
Feeding the baby	3	8	6	2	0
Changing the baby's diaper	6	1	10	2	0
Holding and cuddling the baby	0	6	12	1	0
Making sure the baby is kept safe (from falling and from dangerous objects)	1	2	14	2	0
Bathing the baby each day	9	4	3	3	0
Making the final decision about what the baby needs	6	2	6	5	0
Tending to the baby when he or she wakes up at night	11	1	7	0	0
Making sure that all the baby's supplies are in the house (formula, diapers)	6	3	8	1	1
Talking, singing, and playing with the baby	0	3	11	3	2
Getting the baby dressed each day	13	0	3	2	1
Arranging all the baby's things and keeping them in place	12	2	3	1	1
Making sure the baby gets to health clinic when needed	5	0	10	2	2

Note. $N = 19$. The number under each heading corresponds with the number of adolescents mothers who performed that particular task that percentage of time.

The other eight families (42%) were a combination of role sharing and either role binding or role blocking. These families had five to seven tasks shared between the two parties, and five to six tasks performed 75 to 100% of the time by the adolescent mother or the grandmother. Seven of the eight families (37%) were a combination of role sharing and role binding, while one family (5%) was a combination of role sharing and role blocking.

Results of Data Analysis

The first hypothesis of this study was that rural Black families having balanced dimensions of cohesion and adaptability will manifest the pattern of role sharing in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother. The second hypothesis was that rural Black families having extreme dimensions of cohesion or adaptability will manifest patterns of role blocking or role binding in relation to infant caretaking responsibilities assumed by the adolescent mother and grandmother.

Family Structure and Role Pattern

In order to analyze the family structure as related to the role pattern, two analyses were performed. Because only one family fell into the sharing-blocking category, this family was incorporated into the sharing category in order to allow for adequate cell sizes during data analysis of

role pattern. Therefore, the three categories of role patterns used for chi-square analysis were Sharing, Sharing-Binding, and Binding.

When related to balanced and nonbalanced families, the results were X^2 (2, N = 19) = .4343, p > .05 (see Table 2).

Table 2

Chi-Square Analysis of Balanced and Nonbalanced Family Structure and Sharing, Sharing Binding, and Binding Role Patterns in Rural Black Families with Adolescent Mothers

Family Structure	Role Pattern			
	Binding	Sharing-Binding	Sharing	Total
Balanced				
Group I	2	4	4	10
Nonbalanced				
Group II	3	3	3	9
Total	5	7	7	19

Note. N = 19. X^2 (2, N = 19) = .4343, p > .05.

Since this value was not significant, the alternative hypotheses were not accepted. Balanced families did not exclusively exhibit the pattern of role sharing, nor did nonbalanced families exclusively exhibit patterns of role blocking or role binding.

In order to further analyze the sample using Fisher's Exact Test analysis, the role pattern classifications were recategorized into two groups: Binding and Sharing, with the Sharing group also incorporating the Sharing-Binding group. The Sharing-Binding group was incorporated into the Sharing group, and not into the Binding group, because 5 to 7 tasks were shared 50% of the time between the two parties indicating some degree of interdependence and cooperation.

Fisher's Exact Test analysis resulted in one tail = .4443; two-tail = .6285; $p > .05$ (see Table 3).

Table 3

Fisher's Exact Test Analysis of Balanced and Nonbalanced Family Structure and Sharing and Binding Role Patterns in Rural Black Families with Adolescent Mothers

Family Structure	Role Pattern		Total
	Binding	Sharing	
Balanced			
Group I	2	8	10
Nonbalanced			
Group II	3	6	9
Total	5	14	19

Note. $N = 19$. One-tail = .4443; two-tail = .6285; $p > .05$.

No statistical significance was revealed for this analysis; therefore, the alternative hypotheses were again rejected.

These findings indicate that no relationship exists between family cohesion and adaptability (balanced and nonbalanced families) and role patterns in relation to infant caretaking responsibilities assumed by rural Black adolescent mothers and grandmothers.

Additional Findings

Findings not specifically related to the hypotheses of this study, but pertinent to the research, were identified during data analysis. These have been analyzed according to family structure and role pattern.

Family structure. Only one demographic characteristic appeared to make any significant difference between the two groups (balanced and nonbalanced) at the .05 level of confidence, and this was the number of hours spent with the infant by the grandmother. In Group I (balanced families), the grandmother spent a mean average of 21.6 hours with the infant, while the grandmothers in Group II (not balanced), spent an average of 14.4 hours with the baby ($t(17) = 2.99$, $p < .01$). None of the other demographic characteristics, such as mothers', infant's, or grandmothers' age, number of years in school, family size, or income, yielded any statistically significant difference between the balanced and nonbalanced groups (see Appendix H).

Role pattern. One-way analysis of variance (ANOVA) testing of the three role classifications (Sharing-Binding, Sharing, and Binding) in relation to the demographic characteristics is presented in Appendix I. The only demographic variable which demonstrated any statistically significant difference was the age of the grandmother's youngest child at home. The Sharing-Binding group had significantly lower age (8.9 years) than the Sharing and Binding groups (13.6 years and 13.8 years, respectively).

As expected, the Sharing group scored significantly lower than the other two groups with regard to percentage of time the adolescent performed overall direct caretaking and managing tasks (For caretaking tasks: $F(2, 18) = 25.37$, $p < .01$; for managing tasks: $F(2, 18) = 6.96$, $p < .01$)). The score was lower for the nurturing tasks; however, it was not statistically significant.

A summary of the results of t-test analysis of the two groups after consolidation (Sharing and Binding) in relation to the demographic characteristics is presented in Appendix J. Two demographic variables provided statistically significant differences between these groups. First, the mean age of the grandmother was 54 years for the Binding group and 42 years for the Sharing group ($t(17) = 2.35$, $p < .05$). Second, whether or not the grandmother worked outside the home: 80% of the mothers worked in the Binding group compared to 28% of the Sharing group ($t(17) = 2.13$, $p <$

.05). As with the other three groups, the Sharing group (now including Sharing-Binding) scored significantly lower on the percentage of time the adolescent mother performed direct caretaking tasks ($t(17) = 3.18$, $p < .05$), and managing tasks ($t(17) = 2.58$, $p < .05$) than the Binding group alone.

Chapter V

The Outcomes

The purpose of this study was to examine the relationship between family cohesion and adaptability and role-sharing patterns of infant caretaking functions among rural Black grandmothers and their adolescent daughters. In this chapter, a summary of the findings is presented, along with a discussion of the meaning of these findings. Implications for nursing and recommendations for future research also are presented.

Summary of the Findings

Analysis of the demographic data revealed a sample of 19 adolescent mothers aged 14 to 19 years old with infants of 2 weeks to 10 months of age. The grandmothers ranged in age from 35 to 59 years old, with one great-grandmother who was 83 years old. The families were divided evenly into two groups: those that considered themselves balanced, and those that disagreed or were not balanced.

The role patterns exhibited by the families were categorized into three major classifications: Sharing, Sharing-Binding, and Binding. An equal number of families, seven, were in the Sharing and Sharing-Binding categories, and

five families were in the Binding classification. None of the families exhibited the role blocking pattern.

Overall analysis of the data revealed that no relationship exists between family cohesion and adaptability and role patterns in relation to infant caretaking responsibilities assumed by the rural Black adolescent mother and grandmother.

Discussion

In interpreting the results of this study, caution is recommended because of problems that existed in at least three areas: the research design proved to be restrictive; a small heterogeneous sample was used; and the data gathering instruments presented some disadvantages with this population. These problems are discussed in this section.

Design

The design utilized in this study was descriptive correlational. Attempting to correlate family characteristics based on numerical measurements was restrictive. The responses measured the thoughts of two family members at that particular moment in time, and any observations made were only indicative of their interactions during that particular moment. A qualitative study, such as the studies by Smith (1983) and Facteau, Flaherty, and Garver (1987), in which field methods of interviews were utilized, would have

provided more complete understanding of the structure and role pattern present in that family.

In this study, it was difficult to observe, during a limited amount of time with the family, whether families were actually balanced or not balanced. In 7 of the 19 families, the grandmother and the adolescent mother appeared to communicate well together and have close relationships in the way they reacted to each other. All seven of these families had agreement between them that they perceived their families as being balanced. However, in the remaining 12 families, where there was minimal communication between the parties or even a bit of argument and hostility (e.g., in one instance a sibling cautioned, "Oh-oh . . . They don't even like to talk to each other and you want them to sit together?"), 75% of the families had one or both respondents receiving scores on the FACES III which placed them in the balanced category. Therefore, the question remains whether their being balanced as measured by the FACES III indeed meant that they interacted together and functioned as a balanced family. A modified time-series design with data collection extended over a period of time, such as the first year of the infant's life, would provide more accurate descriptions of family structure.

Instrumentation

With regard to instrumentation, both the FACES III and the Infant Caretaking Questionnaire proved to be

satisfactory, but not ideal. The FACES III, although intended to be easily read and understood by adolescents of age 12, proved to be somewhat difficult for some of the grandmothers to understand and respond. Eight of the 19 grandmothers had 8 or fewer years of education. In approximately one third of the families, the grandmothers needed assistance in either reading the questionnaire, or understanding the items. The assistance provided to the grandmother by the researcher or other family members, in the same room that the adolescent mother was responding to the questionnaire, may have influenced the responses of both respondents. These situations may have altered the actual depiction of the families as being balanced or not balanced.

The Infant Caretaking Questionnaire appeared to be enjoyable for the grandmothers and adolescent mothers to complete together. In most of the families, discussion did occur between these two and any other family members present, with regard to who did which tasks for the infant. In some families, the two participants readily agreed upon the division of tasks between the two, whereas in other families, a large amount of negotiating took place. Although each participant at the end of the session stated they thought the responses actually depicted the situation in their household, after the amount of negotiation and compromise, it was unclear how accurate the responses were to the actual behaviors of the respondents.

As mentioned earlier, the separation into role classifications established by a priori criteria proved to be difficult. In order to rectify this, either the Infant Caretaking Questionnaire needed more items or a better method of scoring and delineation into groups needed to be established. Free's (1988) unpublished questionnaire was more lengthy than the questionnaire used in this study; however, more areas were covered and more precise method of categorizing families into groups was used. In Free's (1988) study, if the first questionnaire did not automatically place the adolescent mother into a certain category, a second questionnaire was used to further determine which role was exhibited in that family. This method of role pattern categorization could have been useful in this study to provide easier delineation into groups.

The families were not able to be categorized definitively by quantitative measures into either role sharing, role binding, or role blocking. Fifty-eight percent of the families did fit well, but the rest of the families fit into a combination of role sharing and role binding, and role sharing and role blocking, with one family incorporated into the sharing classification for purposes of data analysis.

Even though these difficulties were seen, the implication cannot be made that the original categories as outlined by Smith (1983) were not feasible or functional.

Either the instrument or the criteria for establishing role patterns were not comprehensive enough, or was the amount of time allotted for observation and acquisition of this information inadequate.

Data Analysis

Although no significant correlation existed between balanced and nonbalanced families with regard to role patterns within the families, a definite trend was apparent. Balanced families were four times as likely to exhibit the role pattern of sharing; the nonbalanced families were only twice as likely to exhibit the sharing pattern. With a larger sample size, this trend could lead to a statistically significant difference in role pattern between family groups.

Relating the findings of this study with the findings of previous research revealed a number of similarities. Furstenberg and Crawford (1978) found that adequate familial support enhanced the adolescent mother's chances of educational and economic advancement. Even though the effects of familial support were not specifically addressed, the families in this study were very much involved with the responsibilities of raising the infant. In most of the families, the caretaking responsibilities were divided between the grandmother and the adolescent mother. However, older siblings, especially those close in age to the adolescent mother, or those who already had young children

of their own, took on responsibilities as well. In at least two families, the siblings participated to a greater extent than the grandmothers.

Even though families were involved, their impact on the adolescent mother's educational achievements was not easily recognizable. However, families that exhibited the Sharing role pattern did have a greater percentage of adolescent mothers that were presently in school (71%), compared to 40% of the role binders, and 43% of the Sharing-Binding group. They also had a greater percentage of adolescents having plans to return to school (86%), compared to 60 to 71%, respectively. However, these values were not statistically significant.

Russell (1979) found a correlation between high level family functioning and moderate family cohesion and adaptability (balanced families). In this study, a majority of families (80%) who were considered (i.e., having moderate family cohesion and adaptability scores) shared responsibility (or shared in combination with binding). Therefore, with this population of rural Black families, role sharing patterns were exhibited in both balanced and nonbalanced family structures, but with greater tendency in balanced families.

Facteau, Flaherty, and Garver (1987) found that grandmothers were important persons in the lives of adolescent mothers and infants, while the adolescent mothers were still

the primary care-givers. A definite similarity was found in this study. Grandmothers were involved in managing, care-taking, and nurturing functions (the only ones addressed in this study). However, most of the tasks were shared or done most or all of the time by the adolescent mother alone. Interestingly, nurturing was the only task never done 100% of the time by the adolescent mother alone. Thus, in the population of this study, the function of nurturing had to be learned and the nurturing experience of the grandmother was used to offset the inexperience of the adolescent mother.

While responding to the Infant Caretaking Questionnaire, the grandmother often appeared to answer as though she needed to make the adolescent mother feel like she was doing the majority of the work. Most of them were very attuned to being sensitive towards the adolescent mother and her new role. A few of the grandmothers openly praised their daughters. One grandmother even stated that she purposely held back in providing too much care for the infant so that the adolescent mother could develop her role. Only one grandmother expressly criticized her daughter openly about her performance as a mother.

Stevens (1984) addressed multigenerational households and found that the presence of an infant provides opportunity for learning about infants, especially when the grandmother is skilled in facilitating the socialization

process for the young mother. Steven's results were difficult to compare with this study, because although grandmothers were definitely involved, the specific way in which they impacted the childrearing practices of the adolescent mothers was not studied. In some families where there was a large degree of collaboration, the grandmothers expressed the things that they taught their daughters. But again, the exact impact was not measured.

Free (1988) found that the adolescent mothers who were categorized as role binders scored higher in mother-infant interaction skills than did the mothers who were role sharers. In this study, it was difficult to observe the interaction pattern between adolescent mother and infant in a limited amount of time with the family, especially in those situations in 10 out of 19 families when the baby was not present or sleeping. In the 9 families in which the baby was present and awake, there was no observable pattern demonstrating increased amount of closeness between the mothers who were classified as role binders and their infants. It varied between individuals.

Family structure. The Circumplex Model of Families and Marital Systems provided the theoretical basis for the family structure portion of this study. The hypothesis of this model was that higher functioning families are balanced; lower functioning families have extreme scores

and, therefore, are nonbalanced when placed on the Circumplex matrix.

This model provided a comprehensive foundation for this study and was relatively easy to work with. However, the determination of whether the family was actually higher functioning if they were balanced was not easily made.

Role pattern. Smith's (1983) model of families incorporating an adolescent mother also provided an excellent background for this study. The role patterns she originally identified were readily apparent in the families in this study. And, consistent with her findings, the role blocking pattern was rarely seen.

Of the families that fit definitively into role sharing or role binding categories, analysis was made in order to compare it with Free's (1988) description of the adolescent mother in these categories. Free described role sharers as being collaborative or turn-takers, with the majority exhibiting the collaborative pattern. Of the families in this study that exhibited the sharing pattern, the majority (5 out of 6 families) also exhibited the collaborative pattern. The grandmothers took on a nurturant role and appeared to coach the adolescent mother in her role. In the one situation where the grandmother was not at all interested in the mothering role, the turn-taker pattern was seen. The grandmother only participated in caretaking responsibilities when the adolescent mother was not present.

Free (1988) described role binders as being either Binders by Choice, where the adolescent mother chooses to take on the sole role of mother, or Binders by Default, in which the adolescent mother had no choice but to remain with the baby and therefore felt trapped in this role. Of the binding families in this study, 4 of the 5 were Binders by Choice. The adolescent mothers either eagerly assumed the full-time role of the mother, or simply did not want to be in school, and this provided a good excuse. The adolescent mother who lived with the infant's great-grandmother exhibited the role of Binder by Default because she was the only eligible caretaker, and therefore had to take on the sole role of mother.

Findings from these families, then, were not consistent with Free's findings in that in this study, the majority of the adolescent mothers were Binding by Choice, whereas in Free's study, the majority were Binders by Default. Interestingly, in the families that exhibited the role binding pattern, a statistically significant greater percentage (80%) worked as compared to 28% of the grandmothers in the sharing group. The fact that the grandmothers of the role binders were not present as much of the time may have contributed to the establishment of the role binding pattern.

Conclusions

The results of this research study revealed that there was no significant relationship between balanced and nonbalanced families with regard to the role pattern established in the families who participated in this study. The small sample size and the inability to easily delineate role patterns as determined by the Infant Caretaking Questionnaire were contributing factors to these results. This study did confirm the results of previous research that grandmothers are involved in the caretaking role of infants born to adolescent mothers, and that different patterns emerge between the two caretaking individuals.

Implications for Nursing

This study demonstrated that the careful use of questionnaires in clinical practice may prove to enhance assessment and plans for intervention in providing services for adolescent mothers. Because grandmothers and other members of the extended rural Black family were active participants in infant caretaking functions, perinatal assessment and planning needs to involve these individuals as well. Instruments such as the ones used in this study can provide the nurse clinician with increased information about the total family. By discussing responses to the questionnaire, the nurse will gain added insight into the family's ways of handling various situations and may also open the door for increased discussion between the

grandmother and adolescent mother. The nurse can emphasize strengths that are made more evident by their responses, and so facilitate learning about the caretaking role. In this manner, the family may begin to see themselves as more of a team as well.

This study also provided additional data with regard to the feasibility of Smith's (1983) conceptual model for describing teen families. Even though the results of this study were inconclusive, additional information has been acquired relevant to adolescent motherhood.

Recommendations for Future Study

As mentioned earlier, the two main reasons why the results of this research were not conclusive and the null hypothesis was supported were the small sample size and the inability to definitively categorize families into specified role patterns. Therefore, recommendations are as follows:

Research

1. Conduction of a similar study using a larger sample size with a total number of subjects at least greater than 30.

2. Conduction of a similar study in a variety of rural and urban settings.

3. Conduction of a similar study utilizing a more definitive system for identifying role patterns (i.e., Free's [1988] questionnaire after publication).

4. Conduction of a similar study utilizing a more homogeneous sample with regard to the mother's age, her school statue (i.e., either all in school or all at home), and the infant's age (i.e., 3 to 6 months old).

5. Conduction of a similar study utilizing a modified time-series design in order to study this phenomenon over an extended period of time.

Nursing

1. Involvement of grandmothers and other members of extended families in nursing assessment and planning when working with adolescent mothers.

2. Utilization of infant caretaking questionnaires in clinic or home setting when working with adolescent mothers and extended families to promote discussion of role behaviors of the various members and the effectiveness of established role patterns within the family system.

References

Bacon, L. (1974). Early motherhood, accelerated role transition, and social pathologies. Social Forces, 52(3), 333-341.

Bryan-Logan, B., & Dancy, B. (1974). Unwed pregnant adolescents: Their mothers' dilemma. Nursing Clinics of North America, 9(1), 57-68.

Bureau of the Census. (1980). Census of the population: General social and economic characteristics (Mississippi). Washington, DC: Author.

Children's Defense Fund. (1988). Teenage pregnancy: Developing life options (AASA No. 021-00242). New York: Association of Junior Leagues, Inc. and Arlington, VA: American Association of School Administrators.

Colletta, N. D., Hadler, S., & Gregg, C. H. (1981). How adolescents cope with the problems of early motherhood. Adolescence, 16(63), 499-512.

Facteau, L., Flaherty, M. J., & Garver, P. (1987). Grandmother functions in multigenerational families: An exploratory study of black adolescent mothers and their infants. Maternal Child Nursing Journal, 11(2), 61-73.

Free, T. (1988). The relationship of family patterns to adolescent mother/infant interactions. Unpublished doctoral dissertation, University of Texas, Austin, TX.

Furstenberg, F. F. (1980). Burdens and benefits: The impact of early childbearing on the family. Journal of Social Issues, 36(1), 64-87.

Furstenberg, F. F., & Crawford, A. G. (1978). Family support: Helping teenage mothers to cope. Family Planning Perspectives, 10(6), 322-333.

Hardy, J. B. (1988). Teenage pregnancy: An American dilemma. In H. M. Wallace, G. Ryan, & A. Oglesby (Eds.), Maternal and child health practices (pp. 539-553). Oakland, CA: Third Party Publishing Co.

Height, D. I. (1986). Changing the pattern of children having children. Journal of Community Health, 11(1), 41-44.

Hofferth, S. L. (1984). Kin networks, race, and family structure. Journal of Marriage and the Family, 46(11), 791-805.

Melito, R. (1985). Adaptation in family systems: A developmental perspective. Family Process, 24(3), 89-100.

Mississippi Department of Health. (1987). Vital statistics Mississippi 1987. Jackson, MS: Bureau of Information Resources.

Olson, D. H. (1986). Circumplex model VII: Validation studies and FACES III. Family Processes, 25, 337-351.

Olson, D. H., McCubbin, H. I., Barnes, H., Larsen, A., Muxen, M., & Wilson, M. (1985). Family Inventories (2nd ed.). St. Paul, MN: Family Social Science, University of Minnesota.

Poole, C. J., & Hoffman, M. (1981). Mothers of adolescent mothers: How do they cope? Pediatric Nursing, 7(1), 28-31.

Polit, D. F., & Hungler, B. P. (1987). Nursing research: Principles and methods (3rd ed.). Philadelphia, PA: Lippincott.

Russell, C. S. (1979). Circumplex model of marital and family systems III: Empirical evaluation with families. Family Processes, 18, 29-45.

Russell, C. S. (1980). Unscheduled parenthood: Transition to 'parent' for the teenager. Journal of Social Issues, 36(1), 45-63.

Smith, E. W. (1975). The role of the grandmother in adolescent pregnancy and parenting. Journal of School Health, 45, 278-283.

Smith, L. (1983). A conceptual model of families incorporating an adolescent mother and child into the household. Advances in Nursing Science, 6(10), 45-60.

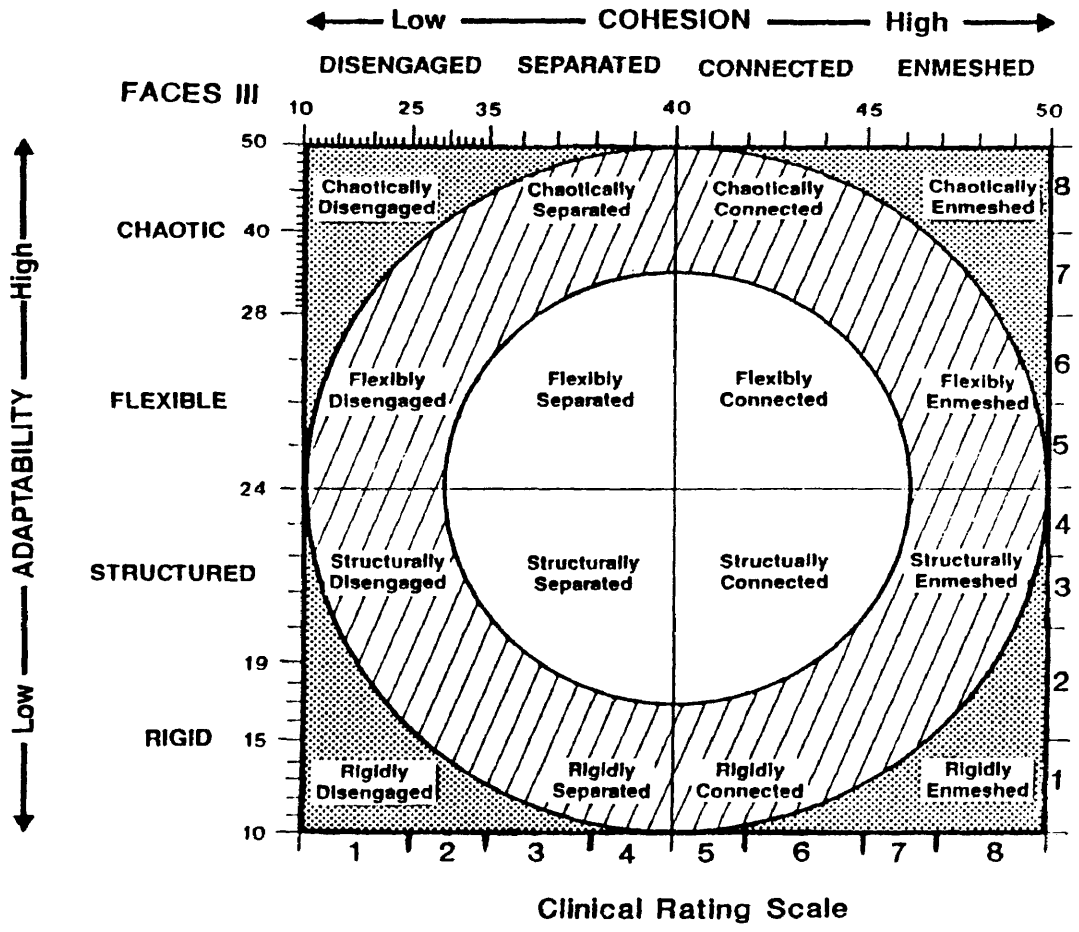
Stevens, J. H. (1984). Black grandmothers' and black adolescent mothers' knowledge about parenting. Developmental Psychology, 20(6), 1017-1025.

Wilson, M. N. (1984). Mothers' and grandmothers' perceptions of parental behavior in three generational black families. Child Development, 55(4), 1333-1339.

Appendix A

Circumplex Matrix

CIRCUMPLEX MODEL
OF MARITAL & FAMILY SYSTEMS



BALANCED MID-RANGE EXTREME

In plotting the couple or family into the Circumplex Model, mark the specific location that most accurately reflects the actual scores.

Family Social Science
290 McNeal Hall, University of Minnesota St. Paul, MN 55108

Appendix B

FACES III

David H. Olson, Joyce Portner, and Yoav Lavee

1	2	3	4	5
ALMOST NEVER	ONCE IN AWHILE	SOMETIMES	FREQUENTLY	ALMOST ALWAYS

DESCRIBE YOUR FAMILY NOW:

_____ 1. Family members ask each other for help.

_____ 2. In solving problems, the children's suggestions are followed.

_____ 3. We approve of each other's friends.

_____ 4. Children have a say in their discipline.

_____ 5. We like to do things with just our immediate family.

_____ 6. Different persons act as leaders in our family.

_____ 7. Family members feel closer to other family members than to people outside the family.

_____ 8. Our family changes its way of handling tasks.

_____ 9. Family members like to spend free time with each other.

_____ 10. Parent(s) and children discuss punishment together.

_____ 11. Family members feel very close to each other.

_____ 12. The children make the decisions in our family.

_____ 13. When our family gets together for activities, everybody is present.

_____ 14. Rules change in our family.

_____ 15. We can easily think of things to do together as a family.

_____ 16. We shift household responsibilities from person to person.

_____ 17. Family members consult other family members on their decisions.

_____ 18. It is hard to identify the leader(s) in our family.

_____ 19. Family togetherness is very important.

_____ 20. It is hard to tell who does which household chores.

FAMILY SOCIAL SCIENCE, 290 McNeal Hall, University of Minnesota, St. Paul, MN 55108

Appendix C

Mother-Grandmother

Infant Caretaking Questionnaire

Instructions: The 12 tasks listed below are about taking care of a small baby. Please decide between the two of you how often each of you does each task for the baby:

All of the time	(100%)
Most of the time	(75%)
Some of the time	(50%)
A little of the time	(25%)
None of the time	(0%)

Put a M for mother or G for grandmother under the time that best applies for that task. Make sure that the total time is 100% (100-0, 75-25, 50-50, 25-75, 0-100).

	All (100%)	Most (75%)	Some (50%)	A Little (25%)	None (%)
1. Feeding the baby.	____	____	____	____	____
2. Changing the baby's diaper.	____	____	____	____	____
3. Holding and cuddling the baby.	____	____	____	____	____
4. Making sure the baby is kept safe (from falling and from dangerous objects).	____	____	____	____	____
5. Bathing the baby each day.	____	____	____	____	____
6. Making the final decision about what the baby needs.	____	____	____	____	____
7. Tending to the baby when he or she wakes up at night.	____	____	____	____	____
8. Making sure that all the baby's supplies are in the house (formula, diapers).	____	____	____	____	____
9. Talking, singing, and playing with the baby.	____	____	____	____	____
10. Getting the baby dressed each day.	____	____	____	____	____
11. Arranging all the baby's things and keeping them in place.	____	____	____	____	____
12. Making sure the baby gets to health clinic when needed.	____	____	____	____	____

#____

Appendix D

Informed Consent Form

Dear Mother and Grandmother:

I am a graduate student in a Family Nurse Practitioner program at Mississippi University for Women. Both of you are invited to help with a study that I am doing about families with young mothers. This study will help you learn more about your family. In order to be in this study, each of you will be asked to complete two short forms about your family. The questions will be given to you in your home and will take less than 30 minutes to complete.

Your help with this study is completely voluntary. All information that you provide will be kept private and no names will be used. Being in this study will have no effect on the health care that you are now receiving.

By signing this form, you are saying that you understand this information and agree to be in this study.

_____	_____
Date	Mother
_____	_____
Researcher	Grandmother

#_____

Appendix E

Demographic Data Profile

for the Mother

Please fill in each blank to the best of your ability.

My age is _____ years old. My baby's age is _____.

The number of people now living together in our household is _____.

I had _____ children before this pregnancy.

The ages of my other children are: _____

The income of my family is approximately:

_____ Less than $500 per month
_____ $500 to $1,000 per month
_____ $1,000 to $2,000 per month
_____ More than $2,000 per month

I was in this grade when I got pregnant with this baby: ____

Now that the baby is born, I am back in school: Yes___ No___
I plan to go back to school: Yes__ No__

I went to a doctor's office or health department for my check-ups while I was pregnant: Yes___ No___

I spend _____ hours per day with this baby.

I am: Single_____ Married_____

#_____

Demographic Data Profile

for the Grandmother

Please fill in each blank to the best of your ability.

My age is _____ years old.

The number of people now living together in our household is _____.

The number of children I have is _____.

The number of children that are living at home with me:____

The age of my youngest child at home with me is _____ years old.

The income of my family is approximately:

_____ Less than $500 per month
_____ $500 to $1,000 per month
_____ $1,000 to $2,000 per month
_____ More than $2,000 per month

I completed this number of years in school:_____

I work outside the home: Yes___ No___

I spend _____ hours per day with this baby.

I am: Single____ Married____ Have a live-in boyfriend____

#_____

Appendix F

Institutional Review Board Approval

MISSISSIPPI UNIVERSITY FOR WOMEN
Columbus, MS 39701

Office of the Provost
3rd floor Simmons Hall
P.O. Box W-1603
(601) 329-7142

February 15, 1989

Ms. Sonja Kerlen
Division of Nursing
Campus

Dear Ms. Kerlen:

The Committee on Use of Human Subjects in Experimentation has recommended approval of your research proposal, and I am happy to approve their recommendation.

Sincerely,

Joyce Hunt

Joyce N. Hunt
Interim Provost

JH:wr

pc: Mrs. Mary Pat Curtis
Dr. Annette Barrar

Appendix G

Raw Data including Characteristics and Results

Family Code	AM's Age	GM's Age	AM's ED	Presently in school	Plans to return to school	GM's ED (Yrs)	Infant's age (Wks)	Hrs spent w/infant by AM	Hrs spent w/infant by GM	Total # of AM's other Children	Age of AM's other children (Mos)
01	16	35	10	Y	Y	8	4	16	8	1	12
02	17	53	11	Y	Y	10	12	16	8	0	-
03	19	41	12	N	Y	10	12	24	24	0	-
04	18	83	12	N	N	4	24	24	24	1	24
05	18	46	12	Y	Y	8	3	16	24	0	-
06	14	39	7	Y	Y	12	16	16	12	0	-
07	18	36	11	Y	Y	8	12	16	18	0	-
08	18	50	10	N	N	10	40	24	24	0	-

Note. AM = Adolescent mother. GM = Grandmother of adolescent.
[a]Family monthly income: 1 = < $500/month. 2 = $500-$1,000/month. 3 = $1,000-$2,000/month.
[b]Perceptions of Family: NB = Not balanced. B = Balanced.
[c]Family role pattern: S = Sharing. SB = Sharing-Binding. B = Binding. SBL = Blocking.

Family Code	AM's Age	GM's Age	AM's ED	Presently in school	Plans to return to school	GM's ED (Yrs)	Infant's age (Wks)	Hrs spent w/infant by AM	Hrs spent w/infant by GM	Total # of AM's other Children	Age of AM's other children (Mos)
09	17	38	7	N	Y	11	24	24	19	1	18
10	17	43	9	N	Y	7	20	24	22	1	21
11	16	43	9	Y	Y	7	2	16	22	0	-
12	16	42	10	Y	Y	10	36	16	24	0	-
13	18	44	10	N	Y	10	18	24	16	1	4
14	18	41	9	N	N	12	28	24	5	0	-
15	19	39	13	Y	N	10	28	24	16	2	7,24
16	18	46	13	Y	Y	6	16	24	24	0	-
17	18	59	11	Y	Y	12	3	16	16	0	-
18	18	38	13	Y	Y	11	6	16	16	0	-
19	19	43	12	N	N	6	24	24	24	1	18

Family Code	Total No. of GM's children	No. of GM's children at home	Age of GM's youngest child at home	Total No. of people in household	GM Married	GM employed outside of home	Family monthly income[a]	AM's perception of family[b]	GM's perception of family[c]	Family role pattern[d]
01	6	6	11	10	N	N	2	NB	B	SB
02	13	3	13	7	N	N	2	NB	B	S
03	5	3	3	7	N	N	1	B	B	SB
04	7	0	-	5	Y	N	2	B	B	B
05	6	4	10	6	N	N	1	B	B	SBL
06	3	1	14	3	N	N	2	NB	NB	S
07	3	3	15	8	Y	Y	3	B	B	S
08	12	4	9	9	Y	N	2	B	B	SB
09	11	10	3	14	Y	N	2	B	NB	SB
10	6	4	14	9	N	Y	2	B	B	S

Family Code	Total No. of GM's children	No. of GM's children at home	Age of GM's youngest child at home	Total No. of people in household	GM Married	GM employed outside of home	Family monthly income[a]	AM's perception of family[b]	GM's perception of family[c]	Family role pattern[d]
11	6	4	14	9	N	Y	2	NB	B	B
12	7	3	14	7	N	N	2	B	B	S
13	6	2	18	6	N	Y	2	B	NB	B
14	5	5	9	10	Y	Y	2	NB	NB	B
15	4	4	11	13	Y	Y	2	B	B	SB
16	6	2	16	5	N	N	1	B	B	SB
17	16	2	14	4	Y	Y	1	B	B	B
18	4	4	9	6	N	Y	2	NB	NB	SB
19	4	4	5	7	N	N	1	NB	NB	S

Appendix H

Demographic Characteristics for Balanced and Nonbalanced Family Structure in Families with Adolescent Mothers

Demographic Characteristic	Group I Balanced Mean[a]	Group II Nonbalanced Mean[b]	Mean of Total N
Adolescent mother's age (Years)	17.90	17.00	17.50
Grandmother's age (Years)	48.50	41.50	45.00
Education of adolescent mother (Years)	12.10	9.80	11.00
Presently in school (%)	50.00	56.00	53.00
Plans to return to school (%)	70.00	78.00	74.00
Education of grandmother (Years)	8.50	9.70	9.10
Infant's Age (Weeks)	14.90	19.40	17.30
Total hours spent with infant by adolescent	20.80	19.80	20.30
Total hours spent with infant by grandmother	21.60	14.40*	18.20
Total number of adolescent mother's other children	.40	.44	.40
Age of adolescent's mother other children (Months)	23.00	13.00	17.30
Total number of grandmother's children	7.20	6.60	6.90
Number of grandmother's children still at home	2.90	4.30	3.60
Age of grandmother's youngest child at home (Years)	11.80	11.80	11.80
Total number of people in household	7.30	8.00	7.60
Grandmother married (%)	50.00	22.00	37.00
Grandmother employed outside home (%)	40.00	44.00	42.00

Note. N = 19.

[a] n = 10. [b] n = 9. [c] N = 19.

*p .01.

Appendix I

Demographic Characteristics for Sharing, Sharing-Binding, and Binding Role Patterns in Families with Adolescent Mothers

Demographic Characteristic	Class 1 Binding	Class 2 Sharing-Binding	Class 3 Sharing	Total Mean
Adolescent mother's age (Years)	17.6	17.9	17.0	17.5
Grandmother's age (Years)	54	41	43	45
Education of adolescent mother (Years)	10.2	12.3	10.3	11.0
Presently in school (%)	40.0	43.0	71.0	53.0
Plans to return to school (%)	60.0	71.0	86.0	74.0
Education of grandmother (Years)	9.0	9.4	8.7	9.1
Infant's Age (Weeks)	15	18.6	17.6	17.3
Total hours spent with infant by adolescent	21.0	22.0	18.3	20.3
Total hours spent with infant by grandmother	16.6	18.7	18.9	18.2
Total number of adolescent's other children	.4	.6	.3	.4
Age of adolescent mother's other children (Months)	14.0	18.0	19.5	17.3
Total number of grandmother's children	8.0	6.9	6.0	6.9
Number of grandmother's children still at home	2.6	4.7	3.0	3.6
Age of grandmother's youngest child at home (Years)	13.8	8.9*	13.6	11.8
Total number of people in household	6.8	9.0	6.7	7.6
Grandmother married (%)	60.0	43.0	14.0	37%
Grandmother employed outside home (%)	80.0	29.0	29.0	42%
Percent of caretaking tasks done by adolescent mother	93.0	80.0	51.4**	72.9
Percent of nurturing tasks done by adolescent mother	52.5	51.7	48.2	50.7
Percent managing tasks done by adolescent mother	79.0	66.0	48.0**	63.2

Note. $N = 19$.

*$p < .05$. **$p < .01$.

Appendix J

Demographic Characteristics for Sharing and Binding Role Patterns for Families with Adolescent Mothers

Demographic Characteristic	Class 1 Binding	Class 2 Sharing	M
Adolescent mother's age (Years)	17.6	17.4	17.5
Grandmother's age (Years)	54.0	42.0*	45.0
Education of adolescent mother (Years)	10.2	11.3	11.0
Presently in school (%)	40.0	57.0	53.0
Plans to return to school (%)	60.0	78.0	74.0
Education (Grandmother) (Years)	9.0	9.1	9.1
Infant's Age (Weeks)	15.0	18.1	17.3
Total hours spent with infant by adolescent	21.0	20.0	20.3
Total hours spent with infant by grandmother	16.6	18.7	18.2
Total number of adolescent's other children	.4	.43	.4
Age of adolescent mother's other children (Months)	14.0	18.6	17.3
Total number of grandmother's children	8.0	6.5	6.9
Number of grandmother's children still at home	2.6	3.9	3.6
Age of grandmother's youngest child at home (Years)	13.8	11.2	11.8
Total number of people in household	6.8	7.9	7.6
Grandmother married (%)	60.0	29.0	37.0
Grandmother employed outside home (%)	80.0	29.0*	42.0
Percent of caretaking tasks done by adolescent mother	93.0	65.7**	72.9
Percent of nurturing tasks done by adolescent mother	52.5	50.0	50.7
Percent of managing tasks done by adolescent mother	79.0	57.5*	63.2

Note. $N = 19$.

*$p < .05$. **$p < .01$.