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Ellen A. Strommen
Major professor

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MATERNAL EMPLOYMENT AND EDUCATION: PREDICTORS OF YOUNG ADOLESCENT CAREER TRAJECTORIES

By

Domini R. Castellino

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ABSTRACT

MATERNAL EMPLOYMENT AND EDUCATION: PREDICTORS OF YOUNG ADOLESCENT CAREER TRAJECTORIES

By

Domini R. Castellino

The present investigation examined a model of mother-adolescent relations, one associated with a developmental contextual framework, both within and across time. Specifically, the current study assessed the direct relations between maternal employment and educational factors and variables relating to adolescent career trajectories.

Participants in the present study were young adolescents and their mothers from the Replication and Extension of the Pennsylvania Early Adolescent Transition Study (REPEATS). The findings indicated that both within and across time, the maternal construct comprised of employment prestige, role satisfaction, and educational attainment positively predicted young adolescents' academic competence, career aspirations, and gender role attitudes. Gender differences were not found when the adolescents were examined at the beginning of sixth grade. However, when assessed at the end of sixth grade, gender differences were found.

The findings are discussed in terms of the positive influence maternal employment-related variables may have on young adolescents career trajectories.

DEDICATION

This dissertation is dedicated to the two women who have touched my life in so many ways - To my mother and my aunt Carmella Menichini. They will remain in my memory and heart always.

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I could not have completed this process without the help and support of several people. I must begin with thanking Drs. Richard and Jacqueline Lerner who have encouraged, supported, and guided me for the past seven years. My sincere gratitude goes out to them for all they have done for me both professionally and personally, and I am grateful to have worked so closely with them. I extend my appreciation to my other committee members, Drs. Ellen Strommen, Alexander von Eye, Francisco Villarruel, and Ellen Kossek for their guidance and support. Their contributions have been an important part of this process.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter I

PROBLEM STATEMENT

The current investigation tests a model of covariation between maternal employment and educational factors and young adolescent career trajectories, one associated with a developmental contextual perspective, to examine how mothers' occupational prestige, role satisfaction, job satisfaction, and educational attainment affects adolescents' career aspirations and expectations, gender role attitudes, and scholastic competence.

Societal Context of the Problem

After more than ten years of neglect by the federal policy making community, children and families are again becoming a national priority (Jacobs, 1994). In February of 1993, for example, President Clinton signed the Family and Medical Leave Act (FMLA) which guarantees job security for selected employees for a maximum of twelve weeks, should they need to leave their job due to the birth of a child or in the case of a family medical emergency. However, this leave is entirely unpaid. As illustrated by this law, the United State lags far behind its industrialized counterparts in terms of paid parental leave policies (J. Lerner, 1994). With almost 68% of mothers with children between the ages of 0-18 years in the labor force (Dorgan, 1995), United States policymakers must address the fact that, even following the birth of a child, the majority of mothers are remaining in the work force.

Unfortunately, however, the precise nature and range of the effects of mothers' employment on children and families remains a still incompletely resolved issue among

social scientists as well as policymakers. There is a pressing need for such information. An estimated 1.5 billion children will be born within the next ten years (Little, 1993). Only about 20 million new jobs will be created by the world's economies by the time that these youth enter the work force (Little, 1993). It is probable, then, that only the best of the best will have the opportunity for gainful employment by the time they enter the job market.

Although most of the 1.5 billion new births over the next decade will occur within Third World nations, Americans will not be immune to problems created by increasing population pressures and proportionately decreasing job opportunities. First, the United States is embedded in a global economy and must maximize the ability of its current and to-be-created work force to compete effectively in the international marketplace. Second, however, no national youth policy per se currently exists in the United States (Hahn, 1994), and thus there is no system in place to create successful and productive transitions to work among the young people of our nation. Accordingly, considering the population trends noted above, millions of youth may experience negative job/career experiences as a consequence of the lack of employment-related youth development policy in the United States.

As an example, consider the area of vocational development. By the time most employment/training services begin during the secondary school period, many youth are already at serious risk for school underachievement, school failure, and dropout; thus, there is an increased probability that these youth will be underemployed and experience prolonged welfare dependency (Schorr, 1988).

To illustrate the links in this process, data from the National Association of Educational Progress (NAEP) indicate that the average score on tests of reading and comprehension abilities for 13 year old adolescents is approximately 52% (National Center for Educational Statistics, 1995). Moreover, 27% of youth between 10-17 years of age are performing below their modal grade level (Dryfoos, 1990). Such poor academic performance and/or functioning below one's modal grade level may be associated with school dropout. Dropouts have significantly fewer job opportunities, they are more often unemployed, they have lower salaries when they are employed, and they are more likely to be dependent on the welfare system (Dryfoos, 1990; Lerner, 1995).

Although these patterns of association between school performance and vocational development are well known (e.g., Dryfoos, 1990; Lerner, 1995; Schorr, 1988), the absence of a national policy and associated programs to address these linkages means that many of our nation's youth are not obtaining the skills needed to participate in the educational system or to make a successful transition into the work force (Dryfoos, 1990). What policies should be developed and what programs should be derived from them, to change the life chances of the young people involved in this process? To address this question, and thus to inform policy makers and influence program design, it is important to understand both the individual and contextual influences that may potentially separate scholastic achievers and highly employable youth from those at risk for scholastic failure and underemployment.

Contextual Influences and the Role of the Family

In recent years, scholarship has placed much emphasis on the relationships between the developing child and the changing social and cultural context in accounting for interindividual differences in development (e.g., Bronfenbrenner, 1979; Ford & Lerner, 1992; Lerner, 1986, 1991). Rather than focus theoretical and empirical emphasis solely on the individual (e.g., his or her personality, intelligence, or motivation) as a basis for variation in important life outcomes, such as academic achievement and status attainment, increasing interest by developmentalists has been directed to the role of the various levels of the context, or the ecology of human development, such as the family, the community, and political, economic, educational, and religious institutions, and even more critically, to the role of individual-context relations in accounting for such outcomes of development in adolescence. Accordingly, numerous contextual variables have been interrelated with person-oriented ones in the study of achievement and career trajectories. Among these contextual variables, the family has remained the level of contextual analysis of major interest to developmentalists pursuing this level of scholarship. This emphasis exists for several reasons.

First, during infancy and early childhood, the family is the major institution of socialization and, more so than school, accounts for major variations in achievement (Coleman, 1961, 1988; Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York; 1966). To a great extent, the family retains its influence on socialization and achievement in adolescence. For example, parental values regarding achievement and

parental involvement in schoolwork and activities is positively associated with adolescent achievement (Paulson, 1994; Steinberg, Lamborn, Dornbusch, & Darling, 1992). A second reason for the emphasis on the family is derived from the literature on status attainment (e.g., Featherman & Hauser, 1976; Hauser & Featherman, 1978; Kalmijn, 1994). Findings here suggest that parents' occupational status strongly predicts their children's educational attainment and occupational status.

However, despite the nature of these findings, there has been increasing and considerable variation in the role of the mother in both the family and the workplace. For instance, the percentage of "White" adolescents (to use the label employed by Cornwell, Eggebeen, and Meschke; 1996) living in single-parent, mother-headed households in the United States has increased from 8.0% in 1940 to 17.4% in 1990 (Cornwell, et al., 1996). The corresponding rates for adolescents labeled as "Black" were 17.5% and 51.5% in 1940 and 1990, respectively (Cornwell, et al., 1996). Similarly, the percentages of "White" and "Black" mothers participating in the labor force have increased dramatically. For example, 5.6% of "White" adolescents in 1940 lived in two-parent homes where their mother was employed (Cornwell, et al., 1996). By 1990, this percentage increased to 42.2%. The corresponding rates for "Blacks" were 13.6% and 24.9% in 1940 and 1990, respectively.

Therefore, given the magnitude and breadth of these historical changes, and the fact that we are uncertain as to how these changes impact on individual adolescent variables pertaining to employment--for example, on adolescents' career attitudes, career expectations, and career aspirations, as well as to related variables such as

scholastic achievement--it is important to focus future research on how variation in mothers' roles in the home and in the workforce impacts on their adolescent children's school and career related behaviors. Accordingly, the present study will focus on the intergenerational linkages among maternal employment and education factors and adolescents career trajectories.

Several findings in the literature support the salience of the specific foci of the proposed research. For example, research has suggested that mothers who are satisfied with their employment situation are more likely to serve as positive role models and transmit positive attitudes about employment to their children (J. Lerner, 1994). Young adolescent girls with single-parent, full-time employed mothers have higher achievement scores compared to young adolescents with single-parent, part-time employed and nonemployed mothers (Alessandri, 1992). Similarly, college females with employed mothers have higher educational aspirations (Stein, 1973), and less stereotyped views regarding occupations (Chandler, Sawicki, & Struffler, 1981), compared to college females with nonemployed mothers.

Moreover, mothers' education is also related to their childrens' career trajectories. For instance, higher maternal education has been related to daughters' higher educational aspirations, a greater knowledge of occupations, more nontraditional courses taken in high school, and a greater likelihood of working during high school (D'Amico, Haurin, & Mott, 1983). In addition, both sons and daughters in this study were more likely to attend and complete college when their mothers attained higher levels of education.

Furthermore, there are important reasons why the study of intergenerational linkages should be conducted in regard to adolescents. The period of early adolescence, in particular, is a critical time for forming goals about the future, especially in regard to career goals (Linver & Silverberg, 1996). Indeed, a major developmental task of adolescence is the formation of a career plan (Schulenberg, Goldstein, & Vondracek, 1991; Vondracek & Lerner, 1982), and it would be useful to know more about the initial phases of the development of this plan. Thus, early adolescence is an important time in which to assess potential maternal influences on children's career trajectories.

Moreover, previous literature on family influences on adolescent career development has failed to capture the process by which parents influence their children's career trajectories (Vondracek, Lerner, & Schulenberg, 1986). Perhaps the absence of a focus on process in previous research is due, at least in part, to the failure of theories used to guide the research. That is, such theories have not advanced concepts that involve a focus on individual-context relations. Developmental systems notions (Ford & Lerner, 1992), such as developmental contextualism (Lerner, 1986), provide a useful framework within which to study maternal employment factors and young adolescent career trajectories.

The developmental contextual framework brings to the fore a focus on the study of human development as it is dynamically embedded within a changing context. Thus, this perspective legitimates the study of individual-context relations and, specific to the present investigation, provides a rationale for a focus on adolescent career development

as it is embedded within the changing context of mothers' employment.

The present research tests a model of covariation between maternal employment factors and adolescent career trajectories, one associated with a developmental contextual perspective, to focus on how mothers' education and employment situation affects young adolescent career attitudes, aspirations and expectations, and scholastic competence. As noted, research on maternal employment and educational influences on adolescents has emphasized the importance of assessing career attitudes, aspirations and expectations, and scholastic achievement during this period of development (e.g., D'Amico, et al., 1983; J. Lerner, 1994; Stein, 1973). Thus, adolescent developmental outcomes will be indexed by the variables of gender role stereotypes related to career attitudes, career aspirations and expectations, and academic competence. To test the key hypothesis of this study--that maternal employment and education factors influence adolescent career trajectories--structural equation modeling will be used to assess the relationships between mothers and young adolescents over three times of testing (see Figure 1).

Data will be derived from the Replication and Extension of the Pennsylvania Early Adolescent Transitions Study (REPEATS; e.g., Jovanovic, Lerner, & Lerner, 1989; Jovanovic & Lerner, 1994; Ohannessian, Lerner, Lerner, & von Eye, 1994; Ohannessian, Lerner, Lerner, & von Eye, 1995). The REPEATS is a short-term, cohort comparative longitudinal study which studied young adolescents from a semi-rural community in central Pennsylvania. Adolescents were first tested at the beginning of sixth grade and tested twice each year until the end of eighth grade.

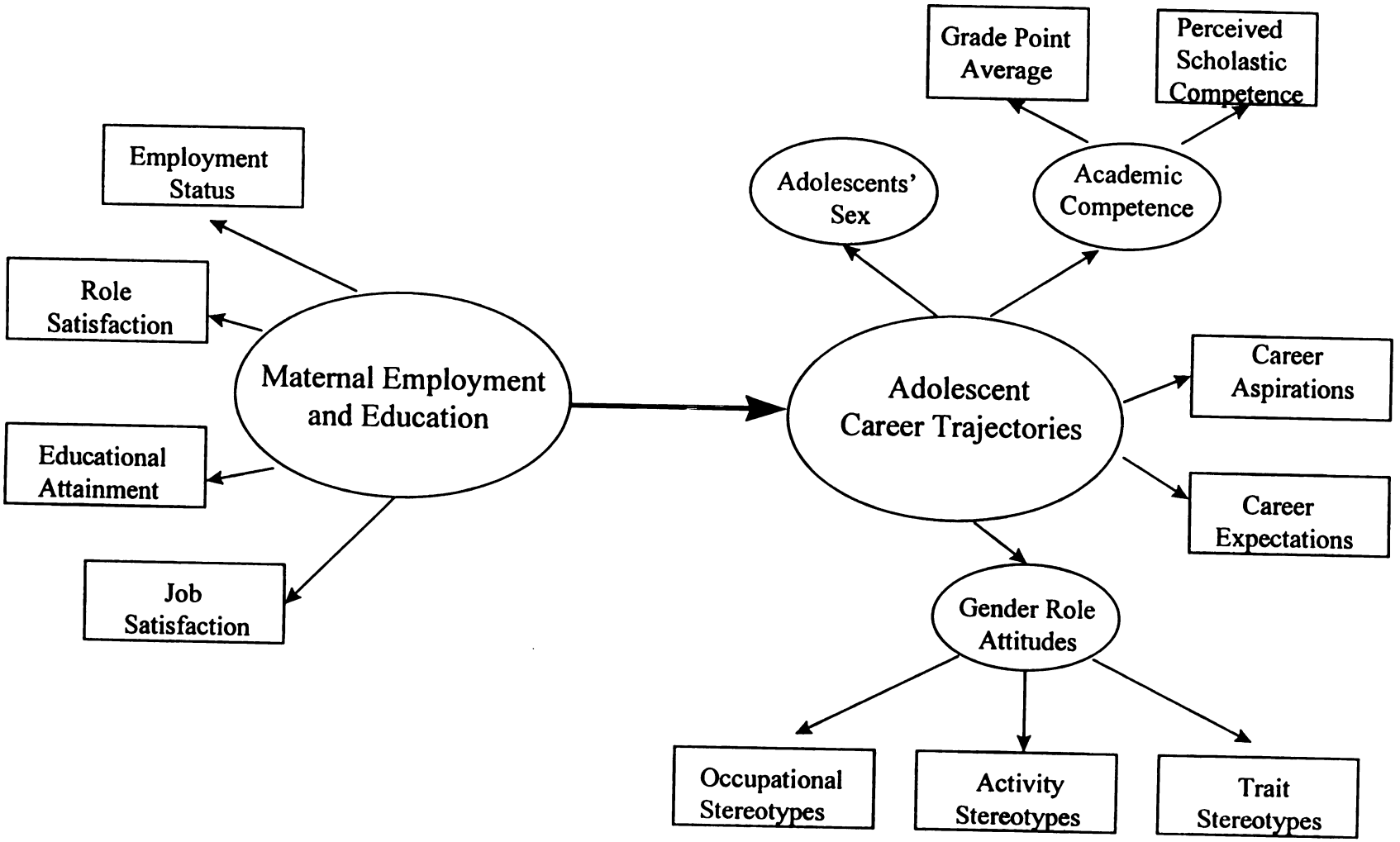

Figure 1. Structural model of maternal employment and education factors and adolescent career trajectories.

Information was also obtained from parents, teachers, and school records. The initial wave of data collection was conducted in October 1989. The present investigation will examine the first three waves of data, from Fall 1989, Spring 1990, and Fall 1990. These waves of data were selected in order to be able to assess developmental change using the maximum number of participants available for study. These data will allow the testing of the above-noted ideas pertinent to the utility of a model of covariation in representing the ways in which mothers' education and employment influence potential career trajectories of their adolescents.

Further details about the methods and hypotheses of this study are presented in Chapter 3. However, prior to a discussion of the methodology of this research, it is useful to review the literature pertinent to the model to be tested in this research. This review is presented in Chapter 2.

Chapter II

REVIEW OF THE LITERATURE

Successful policies for children and families are critical to the future of our nation. They are important for several reasons. First, the United States is embedded within a global economy and thus, it is critical to develop our human capital in order to successfully compete in the international marketplace. Second, policies for children may be viewed as what society simply owes its most vulnerable members (Garfinkel, Hochschild, & McLanahan, 1996). After many years of neglect by the federal policy making community, children and families are once again coming to the fore of our nation's priorities (Jacobs, 1994). For instance, in 1993 the Family and Medical Leave Act (FMLA) was signed into law by President Clinton. This law allows employees 12 weeks of unpaid leave, should they need to leave their job due to the birth of a child or for a family medical emergency. Further, on May 4, 1994 President Clinton signed the School-to-Work Opportunities Act (STWOA). The objective of this policy is to develop a new system which links school-based and work-based training and to attempt to upgrade the careers of those individuals who choose not to pursue a four-year college degree. As is evident by these current policies, the United States government is attempting to address the critical needs of children and families. However, the number of children and families living in poverty, the crime rate and number of juvenile delinquents, the number of unemployed individuals and the school failure and dropout rates, suggest that still enough is not being done to meet the needs of children, youth, and families in our country.

Changes in the labor market, including increasing international competition and new and developing technological advancements present a greater demand for educated and skilled workers (Garfinkel, et al., 1996). Thus, it is imperative that the United States trains and educates its youth to become competitive in this demanding labor market in order to make a successful living. Although youth achievement scores, in general, have been on the rise over the past two decades, the United States still lags behind other industrialized countries (see National Center for Educational Statistics, 1993; U.S. Bureau of the Census, 1996). Moreover, by the time youth reach the secondary school period, many are already at risk for school underachievement, school failure, and dropout; and thus, there is an increasing probability that these youth will be underemployed and experience prolonged welfare dependency (Schorr, 1988).

For example, Dryfoos (1994) reports that approximately 25% of youth enrolled in public elementary and secondary schools in the United States are at risk for school failure and, about 4.5 million children between the ages of 10-14 years are one or more years behind in their modal grade level. In fact, the percentage of 13 year old males behind in their modal grade level, for example, has increased by nine percentage points over the last 15 years (Schmittroth, 1994). The corresponding increase for 13 year old females is almost eight percentage points (Schmittroth, 1994).

Moreover, the gains in achievement scores depicted over the past two decades are quite minimal. To illustrate, data reported by the United States Bureau of the Census (1996), based on tests conducted by the National Association of Educational Progress (NAEP), indicate that reading scores of 13 year old children between the late 1970s and

the early 1990s have increased by only one point. Mathematics scores have shown an increase of nine points, while science scores have indicated an 11-point increase. At first glance these increases in math and science appear to be somewhat substantial. However, we must keep them in perspective by comparing how the United States fares in comparison to other countries competing in the global economy. For instance, an international comparison of 13 year old children in 1991 reported that the United States scored twelfth out of 14 countries assessed in mathematics (National Center for Educational Statistics, 1993). Similarly, the United States was third to last in science scores (National Center for Educational Statistics, 1993). Moreover, our children are continuing to fall behind in mathematics and science achievement. More recent data reports that seventh grade students in the United States scored twenty-second out of thirty- nine countries in mathematics achievement and twelfth out of thirty-nine in science achievement (IEA Third International Mathematics and Science Study, 1996). Similarly, data from the same study reported that eighth grade students scored twenty-fifth in mathematics out of forty-one countries and fourteenth out of thirty-eight countries in science achievement. Thus, it appears that America is not successfully meeting the challenges of providing high quality education for our nation's youth and, subsequently, not providing them with the preparation necessary to be competitive in the international labor market. The consequences of low scholastic achievement are felt even before youth enter the work force.

Poor academic performance and/or functioning below one's modal grade level may be associated with school dropout. Approximately 700,000 children drop out of

school every year (Lerner, 1995). Although the dropout rate has decreased by about 2.5% over the past two decades, the percentage of dropouts reported in 1994 still remains at an alarming 13.3 percent (U.S. Bureau of the Census, 1996). Dropouts have significantly fewer job opportunities, they are more often unemployed, they have lower salaries when they are employed, and they are more likely to be dependent on the welfare system (Dryfoos, 1990; Lerner, 1995). For instance, a male high school graduate earns $260,000 more over the course of his lifetime compared to a male high school dropout and, comparably, a female graduate earns 200,000 more (Lerner, 1995). For every added year of secondary education, the likelihood of welfare dependency in adulthood is decreased by 35% (Lerner, 1995). Further, the rate of unemployment for high school dropouts is more than double the rate of high school graduates (Lerner, 1995). In fact, in 1992 only 36% of high school dropouts were employed (National Center for Educational Statistics, 1993).

As evidenced by the above-noted statistics, it is clear that many of our nation's youth are not obtaining the skills that are necessary to successfully participate in the educational system or to make a successful transition into the work force (Dryfoos, 1990). While it is acknowledged that achievement scores are rising slightly and dropout rates are slowly declining, many scholars and social scientists doubt that these trends are sufficient enough to ensure the competitiveness of Americans in the future (National Center for Educational Statistics, 1993). Consequently, it is important to understand both the individual and contextual influences that may potentially separate scholastic achievers and highly employable youth from those at risk for scholastic failure and

underemployment.

The Role of the Family Context in Adolescent Achievement

In recent years, scholarship has placed much emphasis on the relationships between the developing child and the changing social and cultural context in accounting for interindividual differences in development (e.g., Bronfenbrenner, 1979; Ford & Lerner, 1992; Lerner, 1986, 1991). Rather than focus theoretical and empirical emphasis solely on the individual (e.g., his or her personality, intelligence, or motivation) as a basis for variation in important life outcomes, such as academic achievement and status attainment, increasing interest by developmentalists has been directed to the role of the various levels of the context, or the ecology of human development, such as the family, the community, and political, economic, educational, and religious institutions, and even more critically, to the role of individual-context relations in accounting for such outcomes of development in adolescence. Accordingly, numerous contextual variables have been interrelated with individual ones in the study of achievement and career trajectories. Among these contextual variables, the family has remained the level of contextual analysis of major interest to developmentalists pursuing this level of scholarship. This emphasis exists for several reasons.

First, during infancy and early childhood, the family is the major institution of socialization and, more so than school, accounts for major variations in achievement (Coleman, 1961, 1988). To a great extent, the family retains its influence on socialization and achievement during adolescence. Despite the fact that there is

generally a decrease in the amount of time that adolescents spend with their parents, research indicates that youth still most often seek parental advice on matters regarding further education, career choice, and financial matters (Lerman & Ooms, 1988). Parental values regarding achievement and parental involvement in schoolwork and activities is positively associated with adolescent achievement (Paulson, 1994; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Gottfried (1991) found that school achievement in adolescence was positively correlated with the parents' educational aspirations for their children. Similarly, positive parental beliefs and attributions about their adolescent's capabilities have been reported to be positively related to adolescent academic achievement (Holloway & Hess, 1982). Paulson (1994) found that high levels of parental control and high parental responsiveness were related to positive achievement outcomes for adolescents. This study also reported that school achievement was more positively related to adolescents' own perceptions of parental involvement and parenting rather than parents' perceptions.

In addition, parenting style has also been reported to be related to academic achievement. Studies assessing parenting styles in relation to academic achievement report that children with authoritative parents have higher grades and have more positive attitudes toward school as compared to children with authoritarian or permissive parents (Baumrind, 1971; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Maccoby & Martin, 1983). Authoritative parents also tend to be more involved in their children's education, for instance through participation in activities and helping with homework (Paulson, 1994). The more parents are involved in their children's

education, the better children do in school (Gottfried, 1991; Stevenson & Baker, 1987). These findings may suggest a mediated effect of parenting style on academic performance through parental involvement. In essence, then, past research indicates that, despite quantitative and qualitative changes in the parent-child relationship, parents still play an important role in the socialization of their adolescents.

A second reason for the emphasis on the family is derived from the literature on status attainment (e.g., Featherman & Hauser, 1978; Hauser & Featherman, 1976; Kalmijn, 1994). Research has indicated that family education, family income, and occupational status influence youths' school achievement, college attendance, choice of college, college achievement, and occupational choice (e.g., Alessandri, 1992; Coleman, 1966; Jencks, 1972; Kalmijn, 1994; Rosenfeld, 1980; Sewall, Hauser, & Featherman, 1976). Sociologists have also demonstrated that when parents are employed, their children are more likely to be employed (Rees & Gray, 1982; Lerman, 1986). However, the majority of research in this area has explored the occupational linkages particularly between fathers and sons (Barling, 1991). Research has demonstrated the dominant role of the father in childrens' early career selection (Trice & Knapp, 1991) and numerous studies have reported that sons, in particular, aspire to the careers of their fathers (Featherman & Hauser, 1978; Holland, 1962; Nelson, 1939; Werts & Watley, 1972).

Although this link between fathers' and their sons' occupational preferences has been established, there has been increasing and considerable variation in the role of the mother in both the family and the workplace, and more recent studies have focused on

the increasing role of mothers in childrens' occupational development (e.g., Kalmijn, 1994; Trice & Knapp, 1992). It is useful then to examine these variations in more detail in order to understand how these historical changes may impact childrens' development, specifically in regard to their scholastic achievement and subsequent career trajectories.

Historical Variations in the Roles of Mothers

In the past two decades the United States has witnessed considerable variation in American families and in the roles of mothers in particular. A staggering divorce rate, escalating rates of both single-parent and blended family homes, and dramatic increases in women, and especially mothers, entering the work force have all contributed to a changing picture of family life in America. With a 50% divorce rate, it is estimated that more than half of all youth born in the 1980s will spend some amount of time in a single-parent family before the age of 18 years (Garfinkel et. al., 1996). In 1991, almost 29% of all families in the United States were single-parent families, a sharp increase from only 9% in 1960 (Schmittroth, 1994). Moreover, the preponderant majority, approximately 90% in fact, of all single-parent homes are homes without a father (Schmittroth, 1994). Consequently, most children in single-parent families are living in homes where the mother is primarily, if not solely, responsible for the financial well-being of the household. In part as a consequence of single mothers taking on the breadwinner role, there have been considerable increases in womens' labor force participation.

For example, fewer than 12% of women with children under the age of six

years were employed in 1950, compared to almost 60% in 1991 (National Center for Educational Statistics, 1993). The corresponding rates for mothers with children between the ages of 6-17 years of age are 28.3% and 73.6%, respectively (National Center for Educational Statistics, 1993). Sixty-seven percent of single-mothers with children between the ages of 6-17 years participated in the labor force in 1995 (Taeuber, 1996). The Bureau of Labor Statistics projects even further increases in womens' work force participation. Specifically, 72 million women are expected to participate in the work force by the year 2005, a 24% increase since 1992 compared to a projected growth rate of less than 14% for men (Taeuber, 1996).

Therefore, given the magnitude and breath of these historical changes, and the fact that we are uncertain as to how these changes impact on individual adolescent variables pertaining to employment--for example, on adolescents' career attitudes, career expectations, and career aspirations, as well as to related variables such as scholastic achievement--it is important to focus future research on how variation in mothers' roles in the home and in the workforce impacts on their adolescent children's school and career related behaviors. Accordingly, the present study will focus on the intergenerational linkages among maternal employment and education factors and adolescents' career trajectories. It is useful, then, to review the existing literature pertinent to maternal employment factors and children.

Maternal Employment, Mothers' Education and Adolescent Adjustment

With the increasing numbers of women joining contemporary society's workforce, especially mothers, the issue of womens' employment and its relationship to

children is continuing to be an issue of concern to social scientists. Research thus far, however, has led to many inconsistencies with regard to maternal employment status, simply whether a mother is employed or not employed, and its effects on childrens' cognitive, social, and emotional development (Joebgen & Richards, 1990). To illustrate, literature pertaining to childrens' scholastic achievement, a focal variable of interest in the present investigation, will be reviewed next.

Maternal Employment Status and Childrens' Academic Achievement

The literature reveals that few studies have demonstrated consistent findings with regard to maternal employment status and academic achievement for children. Several findings in this area of the literature support the idea of differential effects for sons and daughters of employed mothers. Montemayor and Clayton (1983) report a general trend toward positive effects for girls and negative or conflicting results for boys. These findings may be related to the idea that the employed mother serves as more of a positive role model for girls but detracts maternal attention from boys. Hoffman (1980) suggests that maternal employment may lead to an increase in independence for children. This independence may lead to an increase in school performance for girls while for boys this newfound independence may lead to a negative impact on school performance. Perhaps this is due to a greater likelihood for boys to increase peer involvement as opposed to academic involvement during this period.

Alessandri (1992) found that daughters of full-time employed mothers had higher achievement scores than sons of employed mothers and children of unemployed

or part-time working mothers. In addition, this study also reported that daughters of full-time employed mothers perceived themselves to have greater scholastic competence as compared to sons of full-time employed mothers and also compared to children whose mothers were not employed full-time (Alessandri, 1992). Similarly, Query and Kuruvilla (1975) found that adolescent daughters of employed mothers displayed higher academic achievement. On the contrary, lower scholastic achievement has been reported in sons of employed mothers (Gold & Andres, 1978). Still other studies found no difference between sons of employed and nonemployed mothers on achievement related variables (e.g., Lerner & Galambos, 1988). Armistead, Wierson, and Forehand (1990) reported no significant differences between young adolescents who had employed and nonemployed mothers on academic performance, social competence, or behavior problems. Similarly, this lack of significant differences has been found in other investigations (e.g., Gottfried, Gottfried, & Bathurst, 1988; Rosenthal & Hansen, 1981).

In sum, much of the research in this area has lead to inconclusive results, with some studies supporting positive or no existing differences in scholastic achievement for daughters and negative or no differences for sons. Many researchers (e.g., Bronfenbrenner & Crouter, 1982; Gottfried, 1991; Hock, DeMeis, & McBride, 1988; Hoffman, 1974; Lamb, 1982; J. Lerner, 1994; Maccoby, 1958; Montemayor & Clayton, 1983) have suggested that the inconsistencies evident in the literature regarding maternal employment status and childrens' outcomes provide evidence that other variables must be considered in this line of research. Gottfried (1991) goes so far

as to say that previous research which has only made comparisons between mothers who were employed and mothers who were not employed is inadequate. This is because any differences found between these groups may not necessarily be due to mothers' employment status per se (Gottfried & Gottfried, 1988; Hoffman, 1984). For example, differences in family socioeconomic status, in parental attitudes toward employment, in mothers' work and home stress, in fathers involvement in child care and household tasks, and in the number of children in the home may all influence child outcomes. Thus, researchers must move beyond employment status as a direct indicator of outcomes for children, and give attention to the variables surrounding mothers' employment which may potentially effect children. One variable that has been given increasing attention in the maternal employment literature, and which will be examined in the current investigation, is mothers' role satisfaction. Thus, it is important to review that literature next.

Maternal Role Satisfaction and Child Functioning

Researchers have found that maternal role satisfaction is a better predictor of child functioning than maternal employment status (Lerner & Galambos, 1986, 1988). That is, mothers who are satisfied with their role, regardless of what role that may be, show more positive interactions with their children. Many studies have suggested that higher maternal role satisfaction leads to more positive child outcomes (e.g., Baruch, 1972; Gold & Andres, 1978; Pearlman, 1981). Research dating back to the 1960s has shown that significant differences were evident between satisfied and dissatisfied mothers. For example, Yarrow, Scott, DeLeeuw, and Heinig (1962) and Hoffman

(1963), reported that children of satisfied mothers perceived their mothers as showing more positive affect and less severe discipline practices. On the contrary, mothers who were dissatisfied perceived their children to be more argumentative. Similarly, Farel (1980) reported that children with unemployed mothers who desired to be working scored lower on school achievement and adjustment measures.

Other research has suggested that role satisfaction leads to self-fulfillment and to the enhancement of self-esteem in the mother, and as such these qualities lead to more sensitive mothering (Lamb, Chase-Lansdale, & Owen, 1979). Thus, role satisfaction may influence the child through the quality of the mother-child relationship (Lerner & Galambos 1986, 1988). Paulson, Koman, and Hill (1990) reported that in a sample of seventh grade adolescents, both mothers and fathers reported more closeness with their children when the mother had high levels of satisfaction with her employment status. Similarly, researchers (Hock, 1980; Hoffman, 1980; Zaslow, Rabinovich, & Suwalsky, 1983) have suggested that maternal role satisfaction leads to more positive mother-child interactions, which in turn, lead to the enhancement of child development. Lerner and Galambos (1988), in their analyses of young children from the New York Longitudinal Study, found support for a "process of influence" model suggesting that maternal role satisfaction and child outcomes may be mediated by mother-child interaction. Specifically, they reported that low levels of role satisfaction were significantly associated with maternal rejection and maternal rejection was significantly related to child difficulty.

Gottfried (1991) reported that satisfaction with parenting among employed

mothers was positively associated with more educational stimulation and higher achievement in children. Additional research has indicated that high role satisfaction is associated with higher academic competence in adolescents regardless of whether their mothers are working or not (Lerner, Hess, & Tubman, 1986). Moreover, mothers who are more satisfied with their employment situation are more likely to transmit positive attitudes pertaining to employment to their children (J. Lerner, 1994).

As the above noted research has indicated, maternal role satisfaction can potentially and significantly influence child functioning, even above and beyond maternal employment status alone. In sum, the literature provides evidence that a potential link does exist among maternal employment-related variables, such as maternal role satisfaction, and childrens' academic achievement and perceived scholastic competence. These variables may also be related to the career development of adolescents. Consequently, it is important to examine this literature next.

Career/Vocational Development in Adolescence

The period of adolescence is a critical time for forming goals about the future, especially in regard to career goals (Linver & Silverberg, 1996). Indeed, a major developmental task of adolescence is the formation of a career plan (Schulenberg, Goldstein, & Vondracek, 1991; Vondracek & Lerner, 1982). Moreover, research has indicated that parents play an important role in the career development of their children (e.g., Alessandri, 1992; Coleman, 1966; Jencks, 1972; Kalmijn, 1994; Rosenfeld, 1980; Sewall, Hauser, & Featherman, 1976). Given the dramatic changes that have taken place in the family over the past century, it is important to examine how these

historical changes have influenced childrens' career and vocational development.

Historical Overview

In previous centuries, children learned necessary job skills by working alongside their parents on the farm, in the shop, or in the factory. Beginning in early colonial times, children were frequently placed in the homes of relatives, neighbors, or even strangers to work as quasi-servants or as contracted apprentices (Lerman & Ooms, 1988). Not only did these arrangements help parents to reduce the financial burden on the family, but they also helped the children learn employment skills and/or gain experiences in aspects of their parents' trade (Lerman & Ooms, 1988). By the early 19th century, children were increasingly sent to schools and boarding academies in order to advance their careers or to help attain status in society. With increasing industrial developments, a shift from rural farm settings to urban settings, the growth of unions, and child labor laws, the first half of the 20th century saw a decrease in youth employment (Lerman & Ooms, 1988). Along with this decrease in youth employment came an increasingly formal, institutionalized, and protracted process for preparing and placing youth in jobs. Thus, over the past several centuries parental influences on youth training and employment have begun to be much less direct than in previous periods of history.

However, contemporary research by sociologists and psychologists, as mentioned above, has demonstrated that parents still influence their childrens' scholastic achievement and occupational development (e.g., Alessandri, 1992; Coleman, 1966; Kalmijn, 1994; Lerman, 1986; Rosenfeld, 1980; Sewall, Hauser, &

Featherman, 1976). Research thus far, however, has not clearly revealed *how* parents' employment effects their childrens' occupational development. Perhaps by encouraging and facilitating career exploration (Vondracek, Lerner, & Schulenberg, 1986; Vondracek & Schulenberg, 1983), by providing a role model to their children, by providing experiences that prepare youth for employment, and/or through providing a network which may help connect the child with job opportunities, parents may influence their childrens' career trajectories (Lerman & Ooms, 1988). The preponderant majority of research in this area to date, as mentioned above, has focused on the father-child and particularly the father-son relationship (e.g., Barling, 1991; Featherman & Hauser, 1978; Holland, 1962; Nelson, 1939; Trice & Knapp, 1991; Werts & Watley, 1972). Given the magnitude and breadth of the historical changes in mothers' work force participation and the literature presented which documents the association between mothers' employment-related variables and childrens' achievement, it is important to examine these maternal employment-related variables and their impact on childrens' career trajectories.

Maternal Employment Factors and Adolescents' Career Development

Many of the dominant theories pertaining to career development agree that the context exerts an important influence on the process of career development (Vondracek & Schulenberg, 1984). As illustrated previously, major variations in the roles of mothers in both the home and workplace provide an important changing social context within which today's youth are developing, particularly in relation to their educational and occupational aspirations.

Some research has found that the educational and career aspirations of adolescents were not associated with having an employed mother (Gold & Andres, 1978). However, many more investigations have suggested the contrary. For example, Stein (1973) reported higher educational aspirations in college females with employed mothers than in college females with nonemployed mothers. Females attending college to pursue traditionally male-dominated occupations more frequently had working mothers than those pursuing traditionally feminine occupations (Almquist, 1974; Tangri, 1972). Daughters with working mothers also received higher grades in college (Nichols & Schauffer, 1975) and more often have aspirations of working outside the home (Almquist & Angrist, 1971; Hoffman, 1974). Similarly, adolescent females with employed mothers have less stereotyped ideas regarding female roles and are more willing to consider nontraditional roles for themselves (Gardner & LaBrecque, 1986; Huston-Stein & Higgins-Trenk, 1978). Bacon and Lerner (1975) reported that second, fourth, and sixth grade females with working mothers had more egalitarian vocational role perceptions than those females with nonemployed mothers. Further, sex-role concepts in both boys and girls as young as nursery school age were more egalitarian if their mother's were working (Gold & Andres, 1978).

Maternal occupational level has also been associated with child outcomes. Specifically, Gottfried (1991) reported that higher maternal occupational status was related to higher levels of cognitive development in children at ages two, three and a half, six, and seven and was also associated with higher educational attitudes and aspirations for five and seven-year-old children. Similarly, Keidel (1970) reported that

ninth grade children had higher grade point averages when their mothers were working at professional level occupations.

Additional research has suggested that mothers' education level is significantly associated with child outcomes. Parental educational attainment has been significantly related to adolescents' own educational plans (Sarigiani, Lee Wilson, Petersen, & Vicary, 1990) and to childrens' occupational aspirations (Farmer, 1985; Holms & Esses, 1988; Majoribanks, 1985). D'Amico, Haurin, and Mott (1983) reported that higher maternal education was related to higher educational aspirations, a greater knowledge of occupations, more nontraditional courses taken in high school and a greater likelihood of working during high school on the part of adolescent daughters. Both sons and daughters were found to be more likely to attend and complete college when their mothers attained higher levels of education.

Zaslow, Rabinovich, and Suwalsky (1991) have supported these findings of higher levels of maternal education associated with higher occupational aspirations for daughters. Since it could be that mothers who have more education are also more employable, maternal employment may have an indirect relationship to some child outcomes through maternal level of education.

In sum, several findings in the literature support the salience of the specific foci of the present investigation. Given the continuing variation in the roles of mothers, specifically in relation to the increasing numbers entering the workforce and the increased opportunities to enter traditionally male-dominated occupations, it is important to continue to examine the intergenerational link among maternal

employment and educational factors and childrens' career trajectories. In addition, there are several reasons why this investigation should be conducted in regard to adolescents.

Adolescence as a Focus of the Present Study

Early adolescence has been chosen as a focus of the present study since it is a period in which both individual and contextual changes are markedly evident. According to Hamburg (1974), the period of early adolescence is one of pronounced physiological, psychological, and social changes. For instance, not only are adolescents faced with the biological changes that accompany puberty (Petersen, 1987) but, in addition, adolescents are faced with challenges regarding school transitions and achievement (Simmons & Blyth, 1987), increasing independence from parents and, subsequently, changing parent-adolescent relations (Hoffman, 1986).

Moreover, the period of early adolescence, in particular, is a critical time for forming goals about the future, especially in regard to career goals (Linver & Silverberg, 1996). Super (1957) maintained that career exploration and decision making is pivotal to adolescence. Similarly, Erik Erikson (1959, 1963) proposed the idea that forming an occupational identity is critical in resolving the identity crisis he believed was indicative of this period of the life-span. Others agree that the process of vocational development during the adolescent period plays an important role in acquiring one's self-identity (Vondracek & Schulenberg, 1984) and that the formation of a career plan is a major developmental task of adolescence (Schlegel, 1995; Schulenberg, Goldstein, & Vondracek, 1991; Vondracek & Lerner, 1982).

Consequently, the adolescent period is a critical time in which to examine the potential maternal influences on childrens' career trajectories.

Moreover, the individual-context relations stressed in the current investigation require that this research be framed by a perspective which focuses on the study of development as it is dynamically embedded within a changing context. Developmental contextualism (Lerner, 1986) provides a useful framework within which to examine adolescent career development as it is embedded within the changing context of mothers' employment. Therefore, it is useful to describe this perspective in more detail.

The Developmental Contextual View of Person-Context Relations

Developmental contextualism rests on two major ideas. First, this perspective asserts that variables from multiple, *qualitatively distinct*, levels of analysis comprise human development (Lerner, 1992, 1993). While most scholars would not disagree with this view, some scholars would adopt a reductionistic approach, attempting to interpret variables from multiple levels in terms of one level (Lerner, 1992, 1993). Rejecting this reductionistic orientation, developmental contextualists would adhere to a nonreductionistic orientation, focusing on the relations--or, better, the "fusions" (Tobach & Greenberg, 1984)--among variables from multiple, qualitatively distinct levels.

This notion is linked to the second key idea of developmental contextualism, that variables from any level one level influence, and are influenced by, variables from

other levels of analysis (Lerner, 1992, 1993). That is, the multi-level variables that comprise human development exist in reciprocal relation (Lerner 1992, 1993). Within the developmental contextual perspective, this reciprocal, or bidirectional relation of variables, is termed *dynamic interactionism* (Lerner, 1978, 1979). As a consequence of the dynamic interactions that occur between multiple levels of organization, "changing relations among levels constitutes the basic process of human developmental change" (Lerner, 1992; p. 377). That is, development involves the changing relations between the developing individual and its changing context.

Several other ideas emerged in the 1980s consistent with the stress in developmental contextualism on the potential for change across life and on the embeddedness of change at multiple levels of organization. The life-span perspective (Baltes, 1979, 1987), in its stress on the entire life course, and the ecological perspective (Bronfenbrenner, 1979), with its emphasis on the contextual systems that impinge on human development, are representative of these ideas. It is useful to note in more detail the relationship between developmental contextualism and these other perspectives.

The Life-Span Developmental Perspective

The life-span view of human development (Baltes, 1979, 1987) represents a set of interrelated ideas about the nature of human development and change (Lerner & Foch, 1987). This perspective has two principle assumptions or propositions. The first proposition, labeled *embeddedness* (Lerner, Skinner, & Sorell, 1980) suggests that the key phenomena of human life exist at multiple levels (e.g., the inner-biological,

individual-psychological, dyadic, social network, community, societal, cultural, outer physical-ecological, and historical) (Lerner, 1987). At any given time, variables from any of these levels may influence individual functioning. Moreover, these levels do not function independently of one another, but rather variables at one level can influence and are influenced by variables at other levels (Lerner, 1987). Consequently, there is a *dynamic interaction* among the levels of analysis, which is the second proposition or assumption of the life-span developmental perspective. This dynamic interaction implies that each level may be both a product and a producer of functioning and change at other levels (Lerner, 1987). The life-span developmental perspective, then, suggests that changes across life are a product and producer of the multiple levels of context within which the individual is embedded (Lerner & Busch-Rossnagel, 1981).

Thus, the developmental contextual perspective is consonant with propositions made by the life-span developmental perspective in regard to both the embeddedness of levels of analysis and the dynamic interaction among these levels. Similar comparability exists between developmental contextualism and the ecological developmental perspective (Bronfenbrenner, 1979).

Ecological Developmental Systems Theory

Bronfenbrenner's (1979) ecological developmental systems theory views the child as a developing organism embedded within a complex system of relationships affected by multiple levels of the context. This theory views the environment as a series of "nested structures," or systems, each contained by the next. Bronfenbrenner referred to these structures as the micro-, meso-, exo-, and macrosystem

(Bronfenbrenner, 1979).

The microsystem refers to the immediate environmental settings in which the individual is embedded. These immediate settings include the home, school, the neighborhood, and the peer group. The connections, or interrelationships among microsystems, for instance the relationship between home and school, constitute the mesosystem. The exosystem refers to settings which do not directly contain the individual, but in which events occur that can affect, or are affected by, events within the microsystem. For example, a child is not part of a mother's work environment, but the mother's experiences at work may affect the way she interacts with her child. Finally, the last of the four systems, the macrosystem, contains the most broad environmental influences such as policies, laws, cultural beliefs, and values.

Ecological developmental systems theory, consonant with developmental contextualism and the life-span view of development, maintains that these systems reciprocally influence each other. That is, change in one system bidirectionally influences change in other systems. Thus, both ecological developmental systems theory and the life-span developmental perspective stress ideas associated with developmental contextual notions of human development. The stress in these perspectives, on dynamic interactions among the multiple levels of organization that comprise the context of development, emphasizes the importance of a multidisciplinary and integrated approach to the study of human development.

Conclusions

As illustrated by the life-span and the ecological developmental systems views, developmental contextualism emphasizes a set of ideas that bring to the fore a focus on the study of human development as it is dynamically embedded within a changing context. As emphasized by Dixon and Lerner (1992) and Dixon, Lerner, and Hultsch (1991) the need to focus on the changing processes of individual development and the development of his/her changing context are critical for an understanding of organism-context relations across life. Moreover, the bidirectional relationship--or "fusion" (Tobach & Greenberg, 1984)--between an active organism and a changing context must be the focus of developmental analyses in order to allow scientific data to adequately reflect the broad range of individual differences in development that exist across human ontogeny and, therefore, to represent the individual and cultural diversity that comprises the context of human life (Lerner, 1991). Moreover, since these "changing organism-context relations constitute the basic process of development" (Lerner, 1991, p. 28), scientific studies which incorporate these relations are essential for an adequate understanding of the change processes that characterize human development across the life-span (Lerner, 1991). In fact, considerable research has demonstrated the usefulness of such developmental contextual ideas (e.g., Baltes, 1987; Brooks-Gunn, 1987; Bronfenbrenner, 1979; Lerner, 1982; Lerner & Busch-Rossnagel, 1981; Lewis & Rosenblum, 1974; Magnusson, 1988; Petersen, 1987). To a great extent, much of this research pertains to the study of early adolescence.

Developmental Contextualism and the Study of Early Adolescence

Early adolescence has been chosen as the focus of the present study since it is a period in which both individual and contextual changes are markedly evident. Moreover, early adolescence is an excellent ontogenetic period in which to appraise the usefulness of developmental contextualism for understanding such change. In fact, the period has been termed a "natural ontogenetic laboratory" for evaluating the usefulness of such ideas (Lerner, 1981). For example, the period of early adolescence has been recognized as one of not only change within the individual (i.e., biological), but also of change within the adolescents' context (i.e., school transitions) as well.

Given that the organism and the multiple contexts in which it is embedded are dynamically interactive (Lerner, 1978, 1979), development involves the relations between the active organism and its changing context. Thus, the "study of early adolescence exemplifies the theoretical and empirical issues involved in the use of a developmental contextual perspective" (Tubman, Lerner, & Lerner, 1991, p. 216).

Conclusions and Overview of the Present Investigation

The present research tests a model of covariation between maternal employment factors and adolescent career trajectories, one associated with a developmental contextual perspective, to focus on how mother's education and employment situation affects young adolescent career attitudes, aspirations and expectations, and scholastic competence. As noted, research on maternal employment and educational influences on adolescents has emphasized the importance of assessing career attitudes, aspirations and expectations, and scholastic achievement during this period of development (e.g.,

D'Amico, et al., 1983; J. Lerner, 1994; Stein, 1973). Thus, adolescent developmental outcomes will be indexed by the variables of gender role stereotypes related to career attitudes, career aspirations and expectations, and academic competence. To test the key hypothesis of this study--that maternal employment and education factors influence adolescent career trajectories--structural equation modeling will be used to assess the relationships between mothers and young adolescents over three times of testing.

Data will be derived from the Replication and Extension of the Pennsylvania Early Adolescent Transitions Study (REPEATS; e.g., Jovanovic, Lerner, & Lerner, 1989; Jovanovic & Lerner, 1994; Ohannessian, Lerner, Lerner, & von Eye, 1994; Ohannessian, Lerner, Lerner, & von Eye, 1995). The REPEATS is a short-term, cohort comparative longitudinal study which studied young adolescents from a semi-rural community in central Pennsylvania. Adolescents were first tested at the beginning of sixth grade and tested twice each year until the end of eighth grade. Information was also obtained from parents, teachers, and school records. The initial wave of data collection was conducted in October 1989. The present investigation will examine the first three waves of data, from Fall 1989, Spring 1990, and Fall 1990. These waves of data were selected in order to be able to assess developmental change using the maximum number of participants available for study. These data will allow the testing of the above-noted ideas pertinent to the utility of a model of covariation in representing the ways in which mothers' education and employment influence potential career trajectories of their adolescents. Further details about the methods of this study are presented in Chapter 3, Methods.

Chapter III

METHODS

To test ideas derived from developmental contextualism, about the role of individual-context relations being central in the process of development, the present investigation examined the intergenerational linkages among maternal employment, maternal education, and maternal role and job satisfaction and young adolescent career trajectories. Research on the role of these maternal variables on adolescents has emphasized the importance of assessing: (1) Gender role stereotypes relating to career attitudes; (2) career aspirations; (3) career expectations; and (4) scholastic competence during this period of development (e.g., D'Amico, et al., 1983; J. Lerner, 1994; Stein, 1973). Accordingly, adolescent developmental outcomes in the current study were indexed by these four variables.

Participants and Design

Participants in the present study are young adolescents and their mothers from the Replication and Extension of the Pennsylvania Early Adolescent Transitions Study (REPEATS; e.g., Jovanovic, et al., 1989; Jovanovic & Lerner, 1994; Ohannessian, et al., 1994; Ohannessian, et al., 1995). The REPEATS sample consists of two cohorts (1989-90 and 1990-91) of sixth-graders from three middle schools within a central Pennsylvania semi-rural school district. The REPEATS is a short-term, cohort-comparative longitudinal study which was designed to follow each of the two cohorts of sixth-graders across their middle school years. The initial wave of data collection, involving the 1989-90 cohort of sixth-graders, was conducted in October, 1989.

Data were collected once in the fall and once in the spring of each school year. At the completion of the study, six waves of data were collected on cohort one, and four waves of data were collected on cohort two. However, the present study focuses only on the first three waves of data--data pertinent to the first cohort only. These waves were selected in order to be able to assess developmental change using the maximum number of participants available for study. The adolescents were from lower-middle class backgrounds with a mean age of 11.8 years (SD=.45) at the beginning of the study. One hundred and sixty young adolescents (44% male; 99% European American), from a total of 454 students (and therefore representing 35% of the total population), in the three middle schools participated at the first wave of testing. In addition, 249 parents (89% of the mothers and 67% of the fathers) participated at this time as well. Table 1 presents the participation rates for the first three waves of testing.

Measures

The primary objective of the present study was to examine the relationship between maternal employment factors and young adolescents' career trajectories, both within and across time. Several measures were used to assess the variables of interest in the present study. These measures are presented in Table 2.

Maternal Employment and Educational Factors

Maternal employment and educational factors were assessed by measures of the mothers' employment status, mothers' educational attainment, and ratings of maternal role and employment satisfaction. Detailed information regarding the measures that

Table 1

Participation Rates for Girls, Boys, and Mothers in the REPEATS Across Three Times of Testing for the 1989-90 Cohort

	Beginning of Sixth Grade		End of Sixth Grade		Beginning of Seventh Grade	
	N	% of Total N	N	% of Total N	N	% of Total N
Girls	88	55%	87	55%	41	49%
Boys	72	45%	70	45%	43	51%
Total Boys and Girls	160	100%	157	100%	84	100%
Mothers	142	____	103	____	57	____

Table 2

The Constructs and Measures from the REPEATS used to Assess the Relationship between Maternal Employment Factors and Young Adolescent Career Trajectories

Construct	Measure Used	Measured By
1. Academic Achievement	2. Academic Grades (GPA)	Student Grades
2. Scholastic Competence	3. Harter (1983) SPP: Subscale for Scholastic Competence	Adolescents' Self-Report
3. Sex Role Attitudes and Occupational Aspirations and Expectations	4. Occupations, Activities, and Traits Attitude Measure	Adolescents' Self-Report
4. Maternal Employment Status and Satisfaction, Educational Attainment, and Role Satisfaction	6. Mothers' Life Situation Survey	Mothers' Self Report

were used to assess these variables is presented below.

Mother's Life Situation Survey (MLSS)

The Life Situation Survey for the mother (MLSS) is a closed-ended questionnaire developed by Lerner, Hess, and Tubman (1986). Constructs assessing the important domains of the mother's employment and family situation were included based on reviews of the literature (e.g., Lerner & Galambos, 1985). Items measure such constructs as the mother's employment history throughout the child's life, her educational status and job type, her role satisfaction with her spouse's employment situation, her perceptions of the child's satisfaction with her employment situation, the division of labor for child care and housework, and her satisfaction with this division of labor.

More specifically, mothers provided information on the following major areas: (a) Their current marital status--i.e., single, married, separated, divorced, remarried--and the duration of their status; (b) their parental status in regard to their relation to their young adolescent--i.e., natural parent, step parent, adoptive parent--and length of their parental status; (c) their educational status; and (d) their employment history with reference to when their young adolescent was less than 2 years old, was 2-5 years old, was 5-10 years old, and from age 10 to the present.

Mothers also (e) select one of 15 job type categories chosen from The Dictionary of Occupational Titles (U.S. Department of Labor, 1977). The jobs that are listed are based on the type of jobs that were expected to be present in the sample, given the demographic characteristics of the participants (predominantly European American,

lower-middle class, semi-rural). Mothers also respond to items assessing: (f) the pattern of division of the household chores and child care activities, and their satisfaction with the arrangement; (g) the role-difficulty experienced by them in balancing all their roles as spouse, parent, employee, volunteer worker, etc.; (h) their degree of satisfaction with their role; (i) their degree of satisfaction with various aspects of their own and their spouse's employment situation; and (j) their perceptions of their children's satisfaction with their employment situation.

The ratings of the division of labor for child care and household work are ordered so that higher scores indicate that the mother does most of the work. The satisfaction items are rated on a five-point Likert-type scale, with high scores indicating greater satisfaction. Perceived role difficulty is rated similarly, with increasing scores corresponding to an increase in experienced difficulty.

In the Pennsylvania Early Adolescent Transitions Study (PEATS), a short-term longitudinal study assessing the transition to junior high school, two subscales were formed through use of the MLSS items (Lerner, et al., 1986). Both subscales were formed during the period of the PEATS when the participants were in the middle of seventh grade. The first subscale, which pertains to satisfaction with one's own employment situation, consisted of five items involving the respondent's ratings of her satisfaction with the following aspects of employment: The job, the salary, the hours, the responsibility, and the status. This subscale had a Cronbach alpha internal consistency coefficient of .83 for mothers (N=28). The second subscale pertained to satisfaction with one's spouse's employment situation, and measured satisfaction with the same five

aspects of the spouse's employment (job, salary, hours, responsibility, and status). This subscale had a Cronbach alpha of .82 for mothers (N=28).

For the present study, maternal employment satisfaction, maternal employment status, mothers' educational attainment, and mothers' report of their role satisfaction were utilized. Mothers' occupational status was assessed by the item: "If you are presently employed, please circle the number below which best describes your job. If your job is not described below, please write it down on the last blank line marked Other. Please circle only one response." Response alternatives ranged from "1"="clerical worker" to "16"="other". For the present investigation, prestige scores were assigned to mothers' occupations based on the Revised Duncan Socioeconomic Index (Stevens & Featherman, 1981). These prestige scores were used for subsequent statistical analyses in the current study. Mothers' educational status was indexed by the item: "Please circle the number below which best describes the final level of education you have obtained." Response alternatives for this item ranged from "1"="elementary school but not high school" to "9"="other". Maternal role satisfaction was indexed by one item: "Please circle the number which most closely represents how satisfied you are with being employed or with not being employed." The response alternatives for this item ranged from "1"="very dissatisfied" to "5"="very satisfied."

Measures of Young Adolescent Career Trajectories

Measures assessing young adolescent career trajectories consist of adolescents' academic achievement, ratings of perceived scholastic competence, gender role

attitudes regarding occupations, activities, and traits, and adolescents' reports of occupational aspirations and expectations. Detailed information regarding the measures that were used to assess these variables is presented below.

Harter's Self-Perception Profile (SPP)

The SPP is a revised version of the Harter (1982) Perceived Competence Scale for Children. The questionnaire provides several separate scores that asses an individual's evaluation of his or her own scholastic competence, physical appearance, social acceptance, athletic competence, behavioral conduct, and global self-worth.

The SPP was designed for third to ninth grade students to measure their competence and adequacy of psychosocial functioning. The response format of the SPP is a four-point structured alternative format where 1 = low perceived competence and 4 = high perceived competence. Each scale includes six items. Scale scores are calculated as the mean of these items.

The SPP has good psychometric characteristics. When Harter (1983) examined a sample of sixth-graders, she found Cronbach alphas coefficients for physical appearance, scholastic, social, athletic, conduct/behavior, and self-worth subscales of .81, .80, .81, .82, .77, and .83, respectively. In addition, when the PEATS data were examined across six times of measurement, Schwab (1990) found Cronbach alpha coefficients to exceed .72 on all of the SPP subscales.

In the present study, only the scholastic competence subscale was utilized. As noted in Table 3, the Cronbach alpha coefficients in the REPEATS sample for the SPP subscale of scholastic competence were .75 ($N=155$) at the beginning of sixth

Table 3

Scales, Cronbach Alpha Coefficients, and Participation Rates for Mothers and Adolescents in the REPEATS Across Three Waves of Testing for the 1989-90 Cohort

	Beginning of Sixth Grade		End of Sixth Grade		Beginning of Seventh Grade	
Scale	Alpha	N	Alpha	N	Alpha	N
Adolescents:						
Scholastic Competence	.75	155	.76	147	.78	83
Sex Role Attitudes:						
Occupations	.97	151	.98	151	.98	83
Activities	.97	145	.97	146	.97	84
Traits	.96	144	.96	147	.96	80
Mothers:						
Job Satisfaction	--	--	--	--	--	--
Role Satisfaction	--	--	--	--	--	--

Note. Job satisfaction and role satisfaction were indexed by a single item and therefore alphas were not calculated for these variables.

grade, .76 (N=147) at the end of sixth grade, and .78 (N=83) at the beginning of seventh grade, respectively.

Academic competence based on grade point average (GPA)

As a means to index academic competence, one based on the teachers' judgements of the students' classroom performance, the grade card of each subject was used to determine an overall grade point average (GPA), which had a possible range from a high of 4.0 to a low of 0.0. Information on the student record card included grades for all academic subjects and all nonacademic subjects (e.g., physical education). In addition, information about school absences and tardiness was included. GPA was calculated through a unit weighing and averaging of each academic subject. The grades contributing to the GPA scores were assigned to the students at the close of the academic year. All grades were converted to a five-point scale where 0 = F and 4 = A.

Gender Role Attitude Measure

To assess young adolescents' sex role attitudes the Occupations, Activities, and Traits Attitude Measure (OAT-AM; Bigler, Liben, & Yekel, 1991) was used. The OAT-AM was designed to assess childrens' attitudes toward stereotypes as opposed to more common assessments of knowledge of stereotypes. In the OAT-AM subjects are asked to select among response alternatives labeled "only men," "only women," or "both men and women" in response to the question "Who should (be)...?" The questionnaire is divided into three domains: 1) Attitudes toward occupations (e.g., pilot, teacher, doctor) which includes 64 items; 2) Attitudes toward activities (e.g.,

cook dinner, fix automobiles) which includes 66 items; 3) Attitudes toward personal traits (e.g., be strong, be gentle), including abilities in mathematics and English (e.g., be good in mathematics, enjoys mathematics, be good in English, enjoy English), which includes 62 items. Each subscale on the OAT-AM is scored by assigning a score of "1" to "both" responses. Each subject receives scores based on the number of items they assign to the "both" category. Therefore, high scores of 64, 66, and 62 on the occupation, activity, and trait domains, respectively, reflect a less traditional sex role attitude.

The occupations, activities, and traits item domains do not represent three orthogonal factors (Yekel, et al., 1991). Indeed, within the REPEATS sample correlations between the three domains ranged from .64 to .84, $p < .001$ at the beginning of sixth grade. The Cronbach alpha coefficients for the REPEATS sample at the beginning of sixth grade were .97, .97, and .96 for occupations, activities, and traits, respectively.

In addition, three open-ended questions were included in the OAT-AM to assess adolescents' career aspirations and expectations and to assess adolescents' beliefs regarding their parents occupational aspirations for them. The questions were: 1. "There are many jobs that adults can do. When I am an adult, the job I think I would like is;" 2. "Sometimes people don't end up doing the job they wanted to do. Do you really think that you will do the job you answered in question #1? If you answered "No", what do you think you will really do?"; and 3. "Sometimes parents seem to want their children to do a certain job when they grow up. The job I think my parents

would want me to have is:" Questions one and two were used in the present study to assess adolescents' career aspirations and expectations. Prestige scores, based on the Revised Duncan Socioeconomic Index (Stevens & Featherman, 1981), were assigned to the adolescents' occupational aspiration and expectation responses. These prestige scores were used for subsequent analyses in the current investigation.

Procedure

Informed parental consent forms were obtained for all of the participants prior to their participation in the study. Data collection involved group testing in each of the three middle schools. Each school was visited across two consecutive days within a span of ten days. All of the subjects, within their respective schools, were tested in small groups of approximately 10 adolescents accompanied by one or two group leaders. Across the two days of testing, subjects completed several self-report questionnaires, including the questionnaires described above. Shortly after the testing within the schools was completed, the adolescents' parents were sent questionnaires to complete and return to the REPEATS investigators.

Chapter IV

RESULTS

To test ideas derived from developmental contextualism, about the role of individual-context relations being central in the process of development, the present investigation examined the intergenerational linkages between maternal employment and education factors and young adolescent career trajectories. To index the construct of maternal employment and education, measures of mothers' employment prestige, mothers' educational attainment, and ratings of maternal role and job satisfaction were used. Adolescent developmental outcomes were indexed by the variables of occupational, activity, and trait stereotypes, career aspirations and expectations, academic achievement and perceived scholastic competence. The variables of interest in the current investigation are present in the REPEATS data set.

Accordingly, using data from the REPEATS, the following questions were addressed:

1. Do maternal employment and educational factors positively predict adolescent career trajectories both within and across time?

2. Are there gender differences?

Several sets of statistical analyses were conducted in order to address these questions. First, to increase power of analyses, missing data were estimated in order to obtain equal sample sizes for each variable. However, data for participants were excluded if more than 10 percent of the item responses for any scale were missing. Estimation was performed using multiple regression methods. No more than 5 percent

of data were estimated for any given variable. Second, descriptive statistics were calculated for each variable of interest, to assess (a) mean levels of functioning for the sample; and (b) if, based on past research with normal samples of youth, the measures were behaving as expected. In addition, correlations were calculated to assess the interrelationships among the variables of interest.

To address Questions 1 and 2, structural equation modeling was used to examine whether maternal employment and education factors predicted adolescent career trajectories within and across time.

Because a significant amount of data were not available for the job satisfaction variable, because only employed mothers responded to this question, this indicator was dropped from the structural equation models that were analyzed. The decision was made to drop this variable rather than severely compromise the sample size available for testing. In addition, there was not a significant difference between adolescents' career aspirations and their career expectations. Thus, only adolescents' career aspirations were included so as not to estimate virtually the same path twice.

Detailed descriptions of all the analyses, as well as the results obtained from these analyses, are presented below.

Descriptive Analyses

Means and standard deviations were calculated for all measures. The means and standard deviations for the maternal employment and education measures (employment prestige ratings, job satisfaction, role satisfaction, and educational attainment) are presented in Table 4. The means and standard deviations for the

Table 4

Means and Standard Deviations of the Maternal Employment and Education Variables at the Beginning and End of Sixth Grade and the Beginning of Seventh Grade

Maternal Measure	Score Range	Beginning of Sixth Grade		End of Sixth Grade		Beginning of Seventh Grade	
		Mean	SD	Mean	SD	Mean	SD
Occupational Prestige	17.4 - 81.6	34.2	18.9	33.4	18.5	35.3	19.6
Role Satisfaction	1 - 5	4.0	1.2	4.0	1.1	4.3	.57
Job Satisfaction	1 - 5	3.9	1.3	3.9	1.2	4.3	.73
Education Level	1 - 8	3.7	1.2	-----	-----	3.8	1.4

Note. N=137 when the adolescents were at the beginning of sixth grade, N=100 when the adolescents were at the end of sixth grade, and N=55 when the adolescents were at the beginning of seventh grade. Education level was not measured at the end of sixth grade.

measures of adolescent career trajectories (academic achievement, perceived scholastic competence, career aspirations, and occupational, trait, and activity stereotypes) are presented in Table 5.

Pearson product-moment correlation coefficients were calculated both within and across time for all maternal and adolescent variables. These data are presented in Tables 6-11.

Relationships between Maternal Employment and Education and Adolescent Career Trajectories

LISREL 8 (Joreskog & Sorbom, 1988) was used to estimate the structural equation models; these models used maximum likelihood estimation of the structural equation parameters to address Questions 1 and 2--whether maternal employment and education positively predicts adolescent career trajectories within and across time and whether gender differences exist in these relationships.

Path between Maternal Employment and Education and Adolescent Career Trajectories at the Beginning of Sixth Grade

Based on the results of the LISREL analyses, the fit of the model appears to be quite good, $\chi^2(30, N=137)=19.36$, $p < .93$, GFI=.97, CFI=1.00, standardized RMR=.05. The structural parameter of interest, the direct path from the maternal employment and education construct to adolescent career trajectories, was significant, indicating that a direct relationship between these constructs is evident at the beginning of sixth grade (see Figure 2).

As shown in Figure 2, most observed variables appeared to be significant

Table 5

Means and Standard Deviations of the Adolescent Career Trajectory Variables at the Beginning and End of Sixth Grade and the Beginning of Seventh Grade

Adolescent Measure	Score Range	Beginning of Sixth Grade		End of Sixth Grade		Beginning of Seventh Grade	
		Mean	SD	Mean	SD	Mean	SD
Occupational Aspirations	13.8 - 90.4	56.9	23.3	57.8	22.4	63.3	22.5
Academic Achievement	0 - 4	3.0	.60	-----	-----	3.1	.52
Scholastic Competence	1 - 4	2.9	.59	3.0	.59	2.9	.45
Occupational Stereotypes	0 - 64	31.6	17.5	35.7	20.8	42.5	16.9
Trait Stereotypes	0 - 62	41.5	17.3	43.8	15.8	44.4	15.9
Activity Stereotypes	0 - 66	38.0	15.9	38.4	17.7	46.3	14.8

Note. N=137 when the adolescents were at the beginning of sixth grade, N=100 when the adolescents were at the end of sixth grade, and N=55 when the adolescents were at the beginning of seventh grade. Academic achievement was not measured at the end of sixth grade.

Table 6

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the Beginning of Sixth Grade

	Maternal Employment and Education (MEE)				Adolescent Career Trajectories (ACT)	
	Occupational Prestige	Role Satisfaction	Job Satisfaction	Educational Attainment	Scholastic Competence	Grade Point Average
MEE:						
Occupational Prestige	1.00					
Role Satisfaction	.16	1.00				
Job Satisfaction	.29**	.41***	1.00			
Educational Attainment	.56***	.13	.17	1.00		
ACT:						
Scholastic Competence	.15	.10	-.03	.19*	1.00	
Grade Point Average	.30***	.34***	.08	.37***	.45***	1.00
Career Aspirations	.22**	.08	.07	.10	.16	.27**
Occupational Stereotypes	.07	.06	-.01	.04	.18*	.22**
Trait Stereotypes	.11	.06	.12	.00	.01	-.05
Activity Stereotypes	.06	.15	-.02	.06	.18*	.26**

Note. N=137 for adolescents and N=137 for mothers. *p<.05; **p<.01; ***p<.001.

Table 6 (Cont')

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the Beginning of Sixth Grade

	Adolescent Career Trajectories (ACT)			
	Career Aspirations	Occupational Stereotypes	Trait Stereotypes	Activity Stereotypes
MEE:				
Occupational Prestige				
Role Satisfaction				
Job Satisfaction				
Educational Attainment				
ACT:				
Scholastic Competence				
Grade Point Average				
Career Aspirations	1.00			
Occupational Stereotypes	.11	1.00		
Trait Stereotypes	-.09	.04	1.00	
Activity Stereotypes	.10	.87***	.02***	1.00

Note. N=137 for adolescents and N=137 for mothers. *p<.05; **p<.01; ***p<.001.

Table 7

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the End of Sixth Grade

	Maternal Employment and Education (MEE)			Adolescent Career Trajectories (ACT)		
	Occupational Prestige	Role Satisfaction	Job Satisfaction	Scholastic Competence	Career Aspirations	Occupational Stereotypes
MEE:						
Occupational Prestige	1.00					
Role Satisfaction	.20*	1.00				
Job Satisfaction	-.16	-.22	1.00			
ACT:						
Scholastic Competence	.19	-.05	-.08	1.00		
Career Aspirations	.15	.08	.01	.23*	1.00	
Occupational Stereotypes	.22*	.05	-.22	.31**	.35***	1.00
Trait Stereotypes	.11	.10	-.05	.22*	-.00	-.06
Activity Stereotypes	.18	-.02	-.16	.23*	.29**	.84***

Note. N=100 for adolescents and N=100 for mothers. *p<.05; **p<.01; ***p<.001. Maternal education and adolescent grade point average were not measured at the end of sixth grade and, therefore, are not represented in the above table.

Table 7 (Cont')

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the End of Sixth Grade

	Adolescent Career Trajectories (ACT)	
	Trait Stereotypes	Activity Stereotypes
MEE:		
Occupational Prestige		
Role Satisfaction		
Job Satisfaction		
ACT:		
Scholastic Competence		
Career Aspirations		
Occupational Stereotypes		
Trait Stereotypes	1.00	
Activity Stereotypes	-.09	1.00

Note. N=100 for adolescents and N=100 for mothers. *p<.05; **p<.01; ***p<.001. Maternal education and adolescent grade point average were not measured at the end of sixth grade and, therefore, are not represented in the above table.

Table 8

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the Beginning of Seventh Grade

	Maternal Employment and Education (MEE)				Adolescent Career Trajectories (ACT)	
	Occupational Prestige	Role Satisfaction	Job Satisfaction	Educational Attainment	Scholastic Competence	Grade Point Average
MEE:						
Occupational Prestige	1.00					
Role Satisfaction	.24	1.00				
Job Satisfaction	-.24	.41**	1.00			
Educational Attainment	.65***	.15	-.24	1.00		
ACT:						
Scholastic Competence	.04	.11	.27	.18	1.00	
Grade Point Average	.29*	.01	-.07	.50***	.23	1.00
Career Aspirations	.14	-.11	-.17	.23	-.03	.33**
Occupational Stereotypes	.05	.04	.12	.17	.27*	.14
Trait Stereotypes	.05	.26	.01	-.05	-.12	-.26
Activity Stereotypes	-.09	.02	.23	-.06	.17	-.07

Note. N=55 for adolescents and N=55 for mothers. *p<.05; **p<.01; ***p<.001.

Table 8 (Cont')

Correlations between Maternal Employment and Education Variables and Adolescent Career Trajectory Variables at the Beginning of Seventh Grade

	Adolescent Career Trajectories (ACT)			
	Career Aspirations	Occupational Stereotypes	Trait Stereotypes	Activity Stereotypes
MEE:				
Occupational Prestige				
Role Satisfaction				
Job Satisfaction				
Educational Attainment				
ACT:				
Scholastic Competence				
Grade Point Average				
Career Aspirations	1.00			
Occupational Stereotypes	-.11	1.00		
Trait Stereotypes	-.00	-.23	1.00	
Activity Stereotypes	-.22	.86***	-.22	1.00

Note. N=55 for adolescents and N=55 for mothers. *p<.05; **p<.01; ***p<.001.

Table 9

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the Beginning and End of Sixth Grade

	Maternal Employment and Education (MEE) Beginning of Sixth Grade				Adolescent Career Trajectories (ACT) Beginning of Sixth Grade		
Measure	Occupational Prestige	Role Satisfaction	Job Satisfaction	Educational Attainment	Scholastic Competence	Grade Point Average	Career Aspirations
MEE: End of Sixth Grade							
Occupational Prestige	.07	-.08	.12	.09	.02	.16	.00
Role Satisfaction	-.06	.16	.19	.00	-.09	-.08	-.01
Job Satisfaction	.01	-.21	-.18	.01	.02	-.02	.03
ACT: End of Sixth Grade							
Scholastic Competence	-.04	-.05	.03	-.01	.09	-.02	.04
Career Aspirations	-.03	-.04	-.01	.05	-.05	.10	.21*
Occupational Stereotypes	.14	-.05	.20	.02	-.05	.05	.15
Trait Stereotypes	-.04	-.09	.02	.10	.01	-.04	-.23**
Activity Stereotypes	.12	-.11	.17	-.02	-.20*	-.16	.09

Table 9 (Cont')

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the Beginning and End of Sixth Grade

	Adolescent Career Trajectories (ACT) Beginning of Sixth Grade		
Measure	Occupational Stereotypes	Trait Stereotypes	Activity Stereotypes
MEE: End of Sixth Grade			
Occupational Prestige	.13	.16	.06
Role Satisfaction	-.10	.03	-.16
Job Satisfaction	-.16	-.20	.19
ACT: End of Sixth Grade			
Scholastic Competence	-.00	.08	-.02
Career Aspirations	.18	.07	.13
Occupational Stereotypes	.17	.17	.12
Trait Stereotypes	-.01	.08	-.02
Activity Stereotypes	.12	.13	.11

Note. N=137 at the beginning of sixth grade and N=100 at the end of sixth grade. *p<.05; **p<.01; ***p<.001.

Table 10

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the Beginning of Sixth Grade and the Beginning of Seventh Grade

	Maternal Employment and Education (MEE) Beginning of Sixth Grade				Adolescent Career Trajectories (ACT) Beginning of Sixth Grade		
Measure	Occupational Prestige	Role Satisfaction	Job Satisfaction	Educational Attainment	Scholastic Competence	Grade Point Average	Career Aspirations
MEE: Beginning of Seventh Grade							
Occupational Prestige	.19	-.16	.01	.12	.13	.14	.11
Role Satisfaction	-.03	.10	.05	-.27*	.05	.12	.27*
Job Satisfaction	-.31	-.03	-.38	-.41*	-.21	-.11	-.04
Educational Attainment	.32*	.03	.25	.25	.05	.05	.23
ACT: Beginning of Seventh Grade							
Scholastic Competence	.03	.10	.00	.15	-.24	-.03	.23
Grade Point Average	.20	-.04	-.09	.10	-.01	-.06	-.06
Career Aspirations	.07	.10	.13	.22	.16	.22	.00
Occupational Stereotypes	.11	.01	.04	.11	-.19	-.06	.04
Trait Stereotypes	-.10	.21	.06	-.09	.04	.07	-.01
Activity Stereotypes	.09	.00	.08	-.01	-.09	-.07	.02

Table10 (Cont')

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the Beginning of Sixth Grade and the Beginning of Seventh Grade

	Adolescent Career Trajectories (ACT) Beginning of Sixth Grade		
Measure	Occupational Stereotypes	Trait Stereotypes	Activity Stereotypes
MEE: Beginning of Seventh Grade			
Occupational Prestige	.02	-.03	.03
Role Satisfaction	.26	.17	.36**
Job Satisfaction	.20	.10	.18
Educational Attainment	.00	.06	.06
ACT: Beginning of Seventh Grade			
Scholastic Competence	.05	-.01	-.06
Grade Point Average	-.20	.14	-.14
Career Aspirations	.08	.08	.23
Occupational Stereotypes	-.20	-.06	-.23
Trait Stereotypes	.09	.01	.14
Activity Stereotypes	-.08	-.15	-.15

Note. N=137 at the beginning of sixth grade and N=55 at the beginning of seventh grade. *p<.05; **p<.01; ***p<.001.

Table 11

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the End of Sixth Grade and the Beginning of Seventh Grade

	Maternal Employment and Education (MEE) End of Sixth Grade			Adolescent Career Trajectories (ACT) End of Sixth Grade	
Measure	Occupational Prestige	Role Satisfaction	Job Satisfaction	Scholastic Competence	Career Aspirations
MEE: Beginning of Seventh Grade					
Occupational Prestige	.13	-.17	.07	.11	.06
Role Satisfaction	.20*	-.17	.07	.13	.02
Job Satisfaction	-.01	-.07	.40*	-.06	-.32
Educational Attainment	-.07	-.12	.16	.10	.03
ACT: Beginning of Seventh Grade					
Scholastic Competence	.03	.02	.16	-.14	-.17
Grade Point Average	-.03	.02	.12	.12	-.04
Career Aspirations	-.06	.01	-.17	-.14	-.06
Occupational Stereotypes	-.03	.00	.05	-.13	-.01
Trait Stereotypes	-.08	-.04	-.06	-.22*	.07
Activity Stereotypes	.03	.10	.06	-.22	-.13

Table11 (Cont')

Correlations between the Adolescent Career Trajectory Variables and the Maternal Employment and Education Variables at the End of Sixth Grade and the Beginning of Seventh Grade

	Adolescent Career Trajectories (ACT) End of Sixth Grade		
Measure	Occupational Stereotypes	Trait Stereotypes	Activity Stereotypes
MEE: Beginning of Seventh Grade			
Occupational Prestige	.16	-.14	.15
Role Satisfaction	.15	-.11	.20
Job Satisfaction	-.13	.36*	-.06
Educational Attainment	.08	-.09	.01
ACT: Beginning of Seventh Grade			
Scholastic Competence	-.12	-.00	-.05
Grade Point Average	-.12	.15	-.12
Career Aspirations	.06	.08	-.08
Occupational Stereotypes	.02	-.20	.15
Trait Stereotypes	-.06	-.14	-.05
Activity Stereotypes	-.01	-.15	.06

Note. N=100 at the end of sixth grade and N=55 at the beginning of seventh grade. *p<.05; **p<.01; ***p<.001.

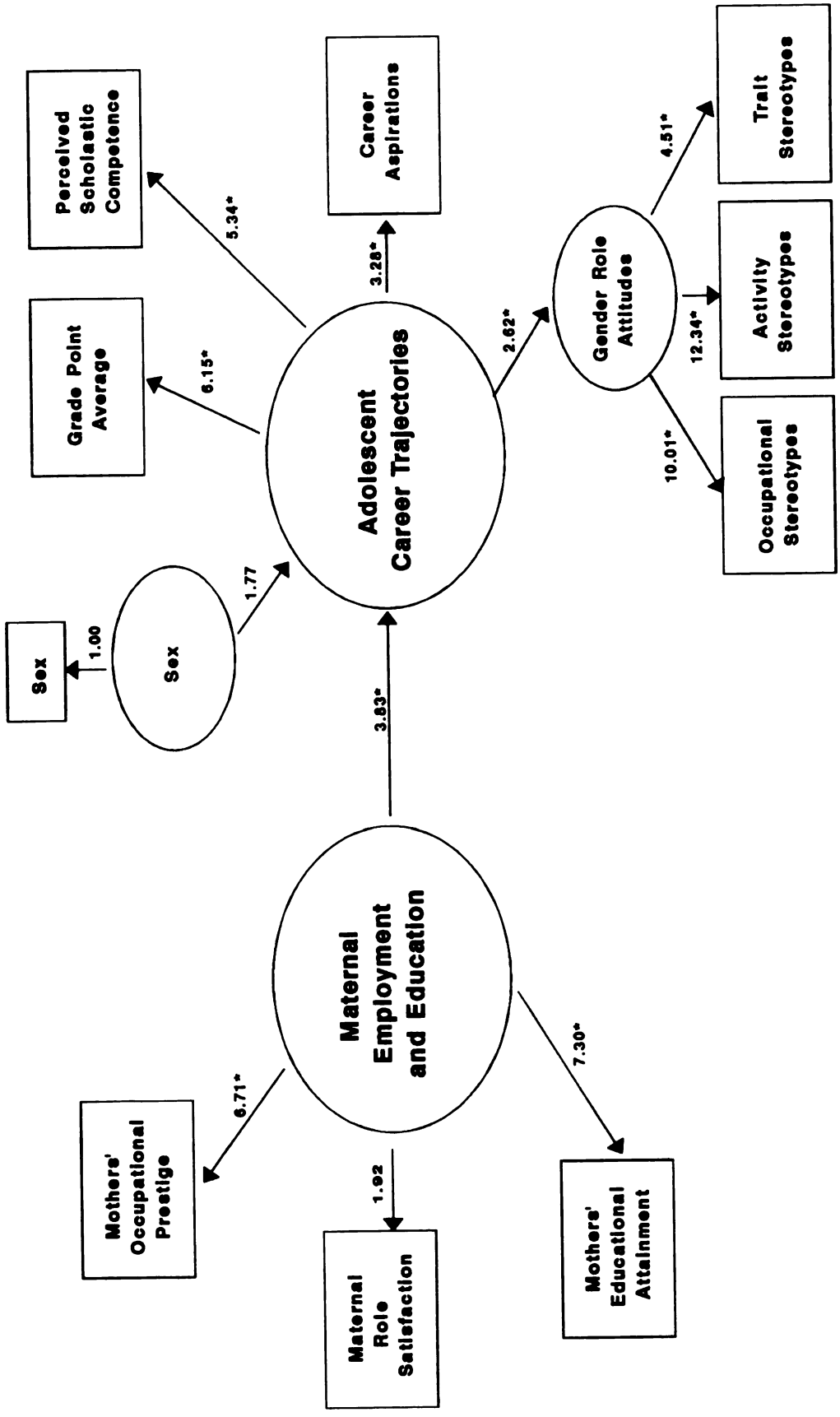

Figure 2 The t-values indicating significant paths for maternal employment and education and adolescent career trajectories at the beginning of sixth grade. Significant paths are indicated by an "*."

indicators of their respective latent constructs. Specifically, maternal employment prestige and educational attainment were significant indicators of the maternal employment and education construct. However, role satisfaction was not a significant indicator of the maternal construct. Adolescent academic achievement, perceived scholastic competence, career aspirations, and occupational, trait and activity stereotypes were significant indicators of the adolescent career trajectory construct. The significance of each of the paths may be examined by reference to the t-values presented in Figure 2. Since the construct of sex was assessed by a single indicator, this parameter was fixed at 1.0 and, therefore, was not estimated. However, the structural path of sex to adolescent career trajectories was free to vary and this path was not significant at the beginning of sixth grade.

Path between Maternal Employment and Education and Adolescent Career Trajectories at the End of Sixth Grade.

Based on the goodness of fit statistics, $\chi^2(23, N=100)=12.13$, $p < .97$, GFI=.98, CFI=1.00, standardized RMR=.04, this model appeared to fit the data well. Similar to the results found at the beginning of sixth grade, the direct path from the maternal employment and education construct to the adolescent career trajectories construct was significant (see Figure 3).

The measurement model at the end of sixth grade included the same variables as the measurement model at the beginning of sixth grade with the exception of adolescent academic achievement. This variable was measured at the beginning of sixth grade and the beginning of seventh grade only; thus, it was not included as part of the

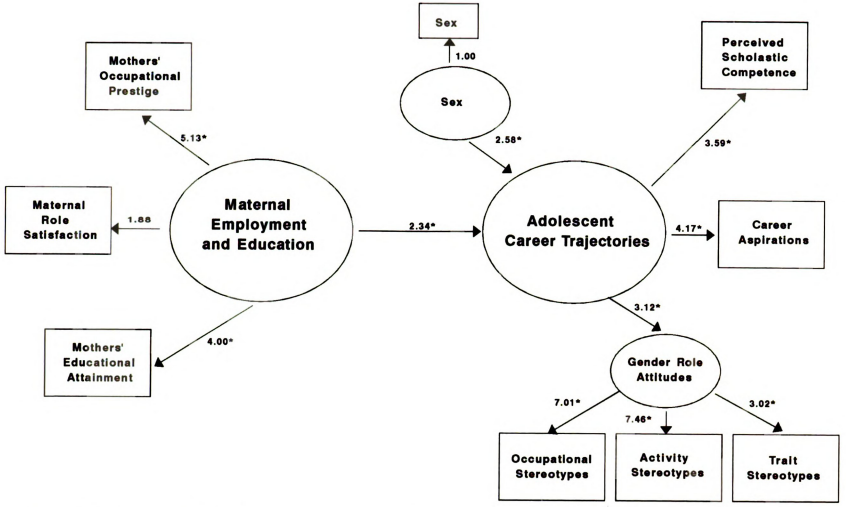

Figure 3. The t-values indicating significant paths for maternal employment and education and adolescent career trajectories at the end of sixth grade. Significant paths are indicated by an "*."

measurement model at the end of sixth grade. Moreover, and as found in prior analyses, the t-values of the paths indicated that all indicators of the latent constructs were significant with the exception of maternal role satisfaction (see Figure 3). Contrary to the results found at the beginning of sixth grade, the structural path from sex to adolescent career trajectories was significant, indicating that adolescent career trajectories may be differentiated by sex at the end of sixth grade.

Path between Maternal Employment and Education and Adolescent Career Trajectories at the Beginning of Seventh Grade

Contrary to the analyses from the beginning and end of sixth grade, the model tested at the beginning of seventh grade was rejected based on the goodness of fit statistics, $\chi^2(31, N=55)=31.91$, $p < .42$, GFI=.89, CFI=.99, standardized RMR=.12. The root mean square residual (RMR) was high, the goodness-of-fit index (GFI) fell below the .90 cut-off for acceptance of the model, and the sample size was quite small. While the same variables were used as indicators for the latent constructs as at the beginning and end of sixth grade, adolescents' scholastic competence and gender role stereotypes were not significant indicators of adolescent career trajectories and mothers' role satisfaction was not a significant indicator of the maternal employment and education construct at the beginning of seventh grade. Sex was also not a significant path. The t-values seen in Figure 4 illustrate these non-significant paths. Due to a significant loss in sample size and, therefore, in statistical power at the beginning of seventh grade, the results for these analyses must be interpreted with caution. Although the smaller sample size available in seventh grade and,

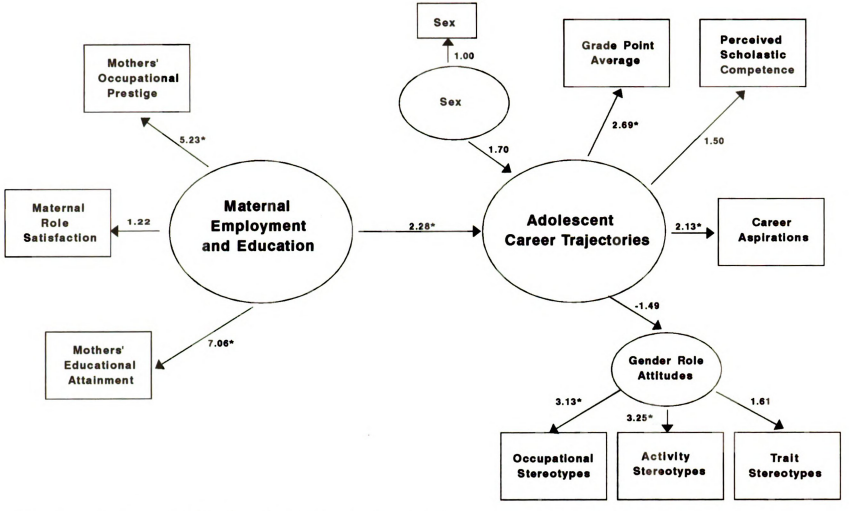

Figure 4. The t-values indicating significant paths for maternal employment and education and adolescent career trajectories at the beginning of seventh grade. Significant paths are indicated b an "*."

consequently, the decrease in statistical power could account for the differences in results from the beginning and end of sixth grade to the beginning of seventh grade, these changes might also have been due to developmental changes in the sample. Further discussion of these issues will be presented in the next chapter.

Conclusions

The measurement models for the data at the beginning and end of sixth grade appeared adequate. All of the indicators of the latent constructs, with the exception of maternal role satisfaction, at the beginning of sixth grade and at the end of sixth grade were significant, indicating that the hypothesized variables were good indicators of their latent constructs. Adolescent scholastic competence and gender role stereotypes were not significant indicators of adolescent career trajectories at the beginning of seventh grade, nor was mothers' role satisfaction a significant indicator of the maternal employment and education construct at the beginning of seventh grade. However, based on the goodness of fit statistics, this model was rejected. Again, the small sample size available at this time of testing may account for the inconsistency between the two sixth grade analyses, on the one hand, and the seventh grade analysis, on the other.

When the structural relations of interest between the latent constructs were examined, the paths were significant at the first two times testing. Specifically, maternal employment and education factors directly predicted adolescent career trajectories both at the beginning and end of sixth grade. Again, the model at the beginning of seventh grade was rejected. Moreover, given that the models at the

beginning and end of sixth grade appeared to be stable over time, additional tests were run to further assess the nature of the relationships between the constructs across time. These models are presented next.

Longitudinal Analyses between Maternal Employment and Education and Adolescent Career Trajectories

Structural equation modeling (LISREL; Joreskog & Sorbom, 1988) was again used to examine the hypothesized relationships across-time between maternal employment and education factors and adolescent career trajectories. Specifically, the relationship between the maternal employment and education construct at the beginning of sixth grade and the adolescent career trajectory construct at the end of sixth grade was tested.

Due to the decrease in statistical power associated with the small sample size available for testing at the beginning of seventh grade, and in light of the cautions about the interpretation of the results discussed in the previous section, data from the beginning of seventh grade were not included in the longitudinal analyses.

The Path between Maternal Employment and Education at the Beginning of Sixth Grade and Adolescent Career Trajectories at the End of Sixth Grade

As illustrated in Figure 5, all indicators of the latent constructs were significant with the exception of maternal role satisfaction. The structural path of interest between maternal employment and education factors at the beginning of sixth grade and adolescent career trajectories at the end of sixth grade was also significant. In accordance with the prior analyses reported for the end of sixth grade, the structural

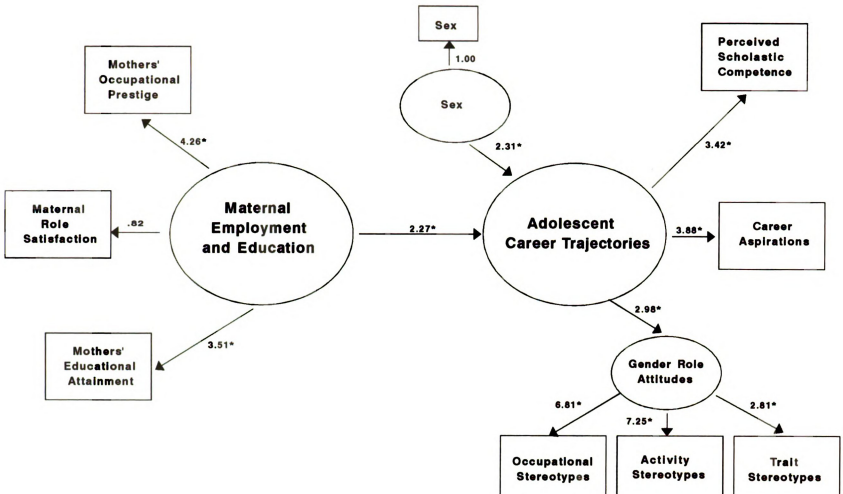

Figure 5. The t-values indicating significant paths for maternal employment and education at the beginning of sixth grade and adolescent career trajectories at the end of sixth grade. Significant paths are indicated by an "*."

path between sex and adolescent career trajectories at the end of sixth grade was significant. Based on the results of the LISREL analysis, the model appeared to fit the data well, $\chi^2(23, N=100)=9.79$, $p < .99$, GFI=.98, CFI=1.00, standardized RMR=.04.

Conclusions

The examination of the structural paths between maternal employment and education factors and adolescent career trajectories within the first two times of testing revealed a significant relationship between these two constructs. Specifically, maternal employment and education predicted adolescent career trajectories both at the beginning and end of sixth grade. This finding is consistent with the emphasis stressed in developmental contextualism regarding the importance of the relationship between the developing individual and his or her changing context (e.g., family context) for psychosocial behavior and development (Lerner, 1991).

In turn, the longitudinal analyses resulted in similar findings. When the across time, structural path between maternal employment and education at the beginning of sixth grade and adolescent career trajectories at the end of sixth grade was examined, the relationship was significant. This pattern of findings suggests that mothers are influencing their adolescents both within and across time. However, the structural path from sex to adolescent career trajectories was significant only when the adolescents were at the end of sixth grade. This finding suggests that maternal employment and education factors related to adolescent career trajectories may begin to be differentiated by sex by the end of sixth grade. However, a full discussion of the nature and meaning

of these results, especially with respect to a developmental contextual approach to human development, will be presented in the next chapter.

Chapter V

DISCUSSION

The primary goal of the present investigation was to examine the influence of maternal employment and educational factors on young adolescent career trajectories. Framed by a developmental contextual perspective about human development (Lerner, 1986, 1991), the current study examined the role of individual-context relations in accounting for variation in adolescent career trajectories.

Developmental contextualism stresses that both characteristics of the developing individual, as well as characteristics of his or her changing context, dynamically interact to comprise the basic process of human development (Lerner, 1992, 1993). Therefore, individual characteristics (e.g., academic achievement and career aspirations) and characteristics of the environment (e.g., mothers' occupational prestige and role satisfaction) that are central to psychosocial behavior and development during adolescence (Lerner & Spanier, 1980; Petersen, 1988) were examined to assess whether maternal employment and educational factors significantly predicted young adolescent career trajectories both concurrently and longitudinally.

The current chapter presents a discussion of the results obtained from the present study. Further, both the strengths and the limitations of the current investigation will be presented. Finally, directions for future research involving mothers and young adolescents will be suggested.

Relationships between Maternal Employment and Education and Adolescent Career Trajectories Within Time

Past research has demonstrated the influence of familial characteristics and parental behaviors on childrens' and adolescents' development (e.g., Castellino, 1995; Demo, Small & Savin-Williams, 1987; Kurdek & Fine, 1994; Lerner & Galambos, 1985, 1986; Ohannessian, Lerner, Lerner, & von Eye, 1994; Paulson, Hill, & Holmbeck, 1991; Wentzel, 1994). For example, Gottfried (1991) reported that the more parents were involved in their child's education, the better the child performed academically. Consistent with other research, the present investigation also found that maternal factors were associated with young adolescent developmental outcomes.

While no previous study has examined the structural relationships between mothers and adolescents in the manner used in the present investigation, past literature does provide evidence for the link between the maternal characteristics examined in the present study and adolescent outcomes. For example, higher achievement scores have been reported for daughters with full-time employed mothers as compared to the achievement scores of both sons and children with unemployed or part-time employed mothers (Alessandri, 1992). Similarly, Gottfried (1991) reported that high maternal occupational status was related to high levels of cognitive development and high educational aspirations for children. While these findings provide evidence for the importance of the role of maternal employment-related variables in regard to adolescent functioning, these prior studies have not examined the nature by which several maternal employment and educational factors together help to predict variation in young adolescent career-related variables. Therefore, these studies have failed to capture how

person-context (i.e. person-parent) relations may potentially influence adolescent career trajectories.

Given that the structural path of interest in the present investigation was significant at both the beginning and end of sixth grade, the current findings suggest that the mothers' characteristics that were examined in the present study had a direct impact on adolescent outcomes when examined concurrently.

These findings are important for several reasons. First, these data suggest a positive influence of factors pertaining to mothers' employment on young adolescent outcomes. For example, the variation in mothers' occupational prestige significantly influenced the occupational prestige of their adolescents' career aspirations. Thus, having an employed mother, particularly a mother with high occupational status, may fare especially well for children as they are developing their own career aspirations and, subsequently, making academic and career decisions. Further, the maternal employment and educational factors examined in the current investigation were also significantly predictive of adolescents' gender role stereotypes in relation to occupations, activities, and individual personality traits. Children with less gender role stereotypes may be more open to various career possibilities, rather than limiting their occupational choices to those that they may consider gender appropriate. In fact, previous research has supported this idea. For instance, adolescent females with employed mothers have less stereotyped ideas regarding female roles (Chandler, Sawicki, & Struffler, 1981) and are more willing to consider nontraditional roles for themselves (Gardner & LaBrecque, 1986; Huston-Stein & Higgins-Trenk, 1978).

Further examination of the results found in the present study revealed that

contrary to existing literature, maternal role satisfaction was not significantly related to adolescent outcomes in the current investigation. Previous studies have reported that higher maternal role satisfaction leads to more positive outcomes for children (e.g., Baruch, 1972; Gold & Andres, 1978; Pearlman, 1981). For example, Paulson, Koman, and Hill (1990) reported that parents of seventh grade adolescents reported more closeness with their children when the mother had high levels of role satisfaction. Similarly, research has indicated that high role satisfaction was associated with higher academic competence in adolescents (Lerner, Hess, & Tubman, 1986). However, these findings were not supported in the present investigation. Maternal role satisfaction in the current study was assessed by a single item only. Perhaps a more robust scale measure of role satisfaction would produce results similar to those reported in previous literature. However, it may be that role satisfaction in this sample of mothers is not being transmitted to the adolescents and, thus, does not have a significant impact on the adolescent outcomes examined.

Moreover, adolescents' sex was not a significant predictor of the adolescents' career-related outcomes at the beginning of sixth grade. However, sex was significant in the results found when the adolescents were at the end of sixth grade. These findings may suggest that adolescents' career trajectories begin to differentiate according to sex sometime around the end of sixth grade. Although the sample was not large enough to divide into separate groups based on the sex of the adolescents, the significant findings at the end of sixth grade suggest that some sex differences may exist. Based on studies found in the existing child development literature (e.g., Alessandri, 1992; Gold & Andres, 1978; Query & Kuruvilla, 1975; Montemayor & Clayton, 1983), adolescent girls are

hypothesized to fare better in regard to the career- and achievement-related variables assessed in the current investigation. Future research with larger sample sizes should continue to examine the potential relationship among maternal employment and educational factors, adolescent career-related variables and adolescents' sex.

With the exception of adolescents' sex, the models tested at the beginning and end of sixth grade appeared to be stable over time. Accordingly, these models were examined across time and are discussed next.

Cross-Time Relationship between Maternal Employment and Education at the Beginning of Sixth Grade and Adolescent Career Trajectories at the End of Sixth Grade

The findings of the analyses of the cross-time relations between maternal employment and education and adolescent career trajectories were similar to those that resulted from the analyses of the within-time relations. Specifically, maternal employment and educational factors at the beginning of sixth grade significantly predicted adolescent career trajectories at the end of sixth grade. Thus, these results suggest that the relationship observed in the within-time analyses appears to be stable across time as well.

Accordingly, both within-time and across-time, direct relations between maternal employment and educational factors and adolescent outcomes are valuable for future researchers to consider in order to provide additional information regarding the dynamics of parent-adolescent relations and, more specifically, how mothers influence the early career trajectories of their adolescents. Moreover, future research should be conducted in a manner that addresses the limitations of the current investigation.

Limitations of the Present Study

Although the present investigation was conducted over three time periods, additional times of measurement and longer periods of time between measurements would have been advantageous. The present study was only able to examine mothers and adolescents from the beginning of sixth grade through the beginning of seventh grade. Additional times of measurement over a longer period of time would enable one to assess more of the developmental changes that are involved in adolescence. In addition, longer periods of time between testing could diminish the influence of practice effects on the results. In turn, more intensive measurement methods and designs, such as involved in P-technique factor analysis (Cattell, Cattell, & Rhymer, 1947; Nesselroade & Ford, 1985), may provide information about the structure of intraindividual change by examining an individual's behaviors over many closely successive occasions. Thus, intensive measurement designs, such as involved in P-technique, could be used to test the above-noted ideas pertaining to the timing of the potential differential role of sex in relation to adolescent outcomes.

Another limitation of the current investigation concerns the sample. Whereas the sample size was large enough to conduct the analyses relevant to the questions of this study for two different times of measurement, a larger sample size would have provided additional power. This increased power would have been especially important given that structural equation modeling techniques were used in the present study. Because structural equation techniques examine all parameters simultaneously, they require a sample large enough to test, with adequate degrees of certainty, the structural parameters under investigation in a given study. In fact, the inconsistency between the results

obtained from the beginning and end of sixth grade, on the one hand, and the beginning of seventh grade, on the other, may be due largely to a substantial drop in sample size (from 137 to 100 to 55 across the three testing times, respectfully). Perhaps with additional power to estimate the parameters of interest at the beginning of seventh grade, additional paths would have been significant and the model may have fit the data adequately.

Moreover, replicating the current analyses with additional populations would also be beneficial in terms of the validity of the study. The current findings are only generalizable to European-American, semi-rural, Pennsylvania mothers and adolescents of a lower-middle class background. For instance, results obtained from conducting the same study with African-American or Asian-American families, or with families of upper-middle class socioeconomic status, or with urban families, might well be different. For example, career-related socialization in Asian-American families generally has a particular focus toward science, math, and engineering (Tsang, 1988), often neglecting a more broad spectrum of occupational opportunities. Thus, parental influences on childrens' career-related socialization in Asian-American families may be very different from those examined in the present investigation.

Another limitation of the current study concerns the measures. All measures used in the present investigation, with the exception of the indices for academic grade point average, were self-report questionnaires; thus, common method variance could have introduced error into the assessment of the functioning of the mothers and of the adolescents. Therefore, measures from additional methods of measurement should be incorporated also into future research in order to ascertain the influence of common

method variance and, through triangulation, to better determine the variance due to the substantive nature of the constructs under study. Furthermore, then, use of multiple measures to assess the same constructs as those in the present study may be beneficial in terms of establishing convergent validity.

In addition, the variables used in the present investigation were drawn from an archival data set. Therefore, only a limited number of variables were available for study. However, the variables chosen from the archive were based on prior research and were all, with the exception of maternal role satisfaction, significant indicators of their latent constructs.

In sum, several means exist for enhancing the current study. Nevertheless, the results obtained from the present investigation are beneficial in many respects. It is useful to note these assets.

Strengths of the Present Study

A primary strength of the present study was its simultaneous use of both within-time and longitudinal assessments of the relationship between mothers and adolescents. An additional strength of the present investigation was the use of structural equation modeling techniques. These techniques allow for simultaneous solutions to be estimated for the parameters of interest. Further, latent constructs can be examined rather than single variables examined in isolation.

Moreover, by examining the relations between mothers' employment and educational factors and adolescents' career trajectories, both within- and across-time, the current investigation contributed to the existing literature on mother-adolescent relations. Specifically, the present study went beyond previous research, which primarily examined

mothers and adolescents at only a single point in time. The current investigation used three times of measurement and examined both within- and across-time relations between mothers and adolescents.

Future Directions

In addition to addressing the limitations of the present study, there are several interesting directions for future research to consider. For example, including fathers' career- and education-related variables may help understand the idea of parental career socialization more fully, and it would be interesting to examine if mothers or fathers exert a more powerful influence on their childrens' career trajectories. In addition, assessing aspects of both the school and the peer contexts would be interesting as well, particularly given the salience of these contexts during the adolescent period.

Conclusions

The current study examined the relationship between maternal employment and educational factors and young adolescent career trajectories both within- and across-time. The findings were that the within-time relations between mothers and adolescents were significant. In turn, this relationship was also significant when examined across time.

By focusing on the multiple levels of analysis in the relations between mothers and adolescents, the present investigation demonstrated the usefulness of adopting a developmental contextual framework when examining person-context relations during this period of life. This perspective should be of further use as the research reported in this study is extended to chart, in an increasingly more refined manner, the evolving relationships between adolescents and their mothers and, more specifically, the early developmental career trajectories of young adolescents.

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LIST OF REFERENCES

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APPENDIX A

MEASURES USED IN THE PRESENT STUDY

Adolescent Measures:

1. Harter's Self-Perception Profile (SPP)
2. Occupations, Activities, and Traits Attitude Measure (OAT-AM)

Maternal Measures:

1. Mother's Life Situation Survey (MLSS)

ID#: _ _ _ _ _
Wave: _
Form: 1 0 2

WHAT I AM LIKE

DIRECTIONS:

We are interested in what each of you is like, what kind of a person you are like, and how you think and feel about different things. This is not a test. There are no right or wrong answers. Since kids are very different from one another, each of you will be putting down something different.

First, let me explain how these sentences work. Here is one sample sentence. I'll read it out loud, and you follow along with me. This sentence talks about two kinds of kids.

SAMPLE SENTENCES

Really True for me	Sort of True for me				Sort of True for me	Really True for me
☐	☐	Some kids would rather play outdoors in their spare time.	BUT	Other kids would rather watch T.V.	☐	☐

(1) First, I'd like you to decide whether you are more like the kids on the left side who would rather play outdoors, or whether you are more like the kids on the right side who would rather watch T.V. Don't mark anything down yet, but first decide which kind of kid is most like you, and go to that side of the page.

(2) Now, decide whether that is only sort of true for you, or really true and mark your answer box with an "X".

BE SURE TO ONLY CHECK ONE OF THE FOUR BOXES FOR EACH PAIR OF SENTENCES.

(3) Now we have some more sentence pairs that we would like you to choose the one that goes with what is true for you, what you are most like.

Please continue. . . .

ID#: _ _ _ _

	Really True for me	Sort of True for me	***ONLY CHECK ONE BOX FOR EACH SENTENCE PAIR***			Sort of True for me	Really True for me	
1.	☐	☐	Some kids feel that they are very *good* at their school work	BUT	Other kids *worry* about whether they can do the school work assigned to them.	☐	☐	___
2.	☐	☐	Some kids find it *hard* to make friends	BUT	Other kids find it's pretty *easy* to make friends.	☐	☐	___
3.	☐	☐	Some kids do very *well* at all kinds of sports	BUT	Other kids *don't* feel that they are very good when it comes to sports.	☐	☐	___
4.	☐	☐	Some kids are *happy* with the way they look	BUT	Other kids are *not* happy with the way they look.	☐	☐	___
5.	☐	☐	Some kids often do *not* like the way they *behave*	BUT	Other kids usually *like* the way they behave.	☐	☐	___
6.	☐	☐	Some kids are often *unhappy* with themselves	BUT	Other kids are pretty *pleased* with themselves.	☐	☐	___
7.	☐	☐	Some kids feel like they are *just as smart* as as other kids their age	BUT	Other kids aren't so sure and *wonder* if they are as smart.	☐	☐	___
8.	☐	☐	Some kids have *alot* of friends	BUT	Other kids *don't* have very many friends.	☐	☐	___
9.	☐	☐	Some kids wish they could be alot better at sports	BUT	Other kids feel they are good enough at sports.	☐	☐	___
10.	☐	☐	Some kids are *happy* with their height and weight	BUT	Other kids wish their height or weight were *different*.	☐	☐	___
11.	☐	☐	Some kids usually do the *right* thing	BUT	Other kids often *don't* do the right thing.	☐	☐	___
12.	☐	☐	Some kids *don't* like the way they are leading their life	BUT	Other kids *do* like the way they are leading their life.	☐	☐	___

Please continue . . .

iARTER/2

ID#: _ _ _ _ _

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
13.	☐	☐	Some kids are pretty *slow* in finishing their school work	BUT	Other kids can do their school work *quickly.*	☐	☐ ___
14.	☐	☐	Some kids would like to have alot more friends	BUT	Other kids have as many friends as they want.	☐	☐ ___
15.	☐	☐	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might *not* do well at sports they haven't ever tried.	☐	☐ ___
16.	☐	☐	Some kids wish their body was *different*	BUT	Other kids *like* their body the way it is.	☐	☐ ___
17.	☐	☐	Some kids usually *act* the way they know they are *supposed* to	BUT	Other kids often *don't* act the way they are supposed to.	☐	☐ ___
18.	☐	☐	Some kids are *happy* with themselves as a person	BUT	Other kids are often *not* happy with themselves.	☐	☐ ___
19.	☐	☐	Some kids often *forget* what they learn	BUT	Other kids can remember things *easily.*	☐	☐ ___
20.	☐	☐	Some kids are always doing things with *alot* of kids	BUT	Other kids usually do things *by themselves.*	☐	☐ ___
21.	☐	☐	Some kids feel that they are *better* than others their age at sports	BUT	Other kids *don't* feel they can play as well.	☐	☐ ___
22.	☐	☐	Some kids wish their physical appearance (how they look) was *different*	BUT	Other kids *like* their physical appearance the way it is.	☐	☐ ___
23.	☐	☐	Some kids usually get in *trouble* because of things they do	BUT	Other kids usually *don't* do things that get them in trouble.	☐	☐ ___
24.	☐	☐	Some kids *like* the kind of *person* they are	BUT	Other kids often wish they were someone else.	☐	☐ ___

Please continue . . .

ID#: _ _ _ _

	Really True for me	Sort of True for me				Sort of True for me	Really True for me	
25.	☐	☐	Some kids do *very well* at their classwork	BUT	Other kids *don't* do very well at their classwork.	☐	☐	___
26.	☐	☐	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age *do* like them.	☐	☐	___
27.	☐	☐	In games and sports some kids usually *watch* instead of play	BUT	Other kids usually *play* rather than just watch.	☐	☐	___
28.	☐	☐	Some kids wish something about their face or hair looked *different*	BUT	Other kids *like* their face and hair the way they are.	☐	☐	___
29.	☐	☐	Some kids do things they know they *shouldn't* do	BUT	Other kids *hardly ever* do things they know they shouldn't do.	☐	☐	___
30.	☐	☐	Some kids are very *happy* being the way they are	BUT	Other kids wish they were *different*.	☐	☐	___
31.	☐	☐	Some kids have *trouble* figuring out the answers in school	BUT	Other kids almost *always* can figure out the answers.	☐	☐	___
32.	☐	☐	Some kids are *popular* with others their age	BUT	Other kids are *not* very popular.	☐	☐	___
33.	☐	☐	Some kids *don't* do well at new outdoor games	BUT	Other kids are *good* at new games right away.	☐	☐	___
34.	☐	☐	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	☐	☐	___
35.	☐	☐	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.	☐	☐	___
36.	☐	☐	Some kids *are* not very happy with the way they do alot of things	BUT	Other kids think the way they do things is *fine*.	☐	☐	___

STOP.

HARTER/4

ID#: ___ ___ ___ ___
Wave: _____
Form: 1 0 7b

WHAT I WANT TO BE...

Now that you have looked through the list of different jobs, you may have gotten some new ideas about what you might be. In case you did, we would like to give you a chance to answer these questions again. If you haven't changed your mind, just answer the same as before.

1. There are many jobs that adults can do. When I am an adult, the job I think I would like is:

_____

2. Sometimes parents seem to want their children to do a certain job when they grow up. The job I think my parents would want me to have is:

_____

3. Sometimes people don't end up doing the job they wanted to do. Do <u>you</u> really think that you will do the job you answered in question #1?

Circle: YES NO

If you answered "No", what do you think you will <u>really</u> do?

_____

PLEASE CONTINUE

ID#: ___ ___ ___ ___
Wave: _____
Form: 1 0 8a

WHO SHOULD...

Here is a list of jobs that people can do. We want you to tell us if you think each job should be done by men, by women, or by both men and women. There are no right or wrong answers. We just want to know who you think should do these jobs. If you think it should be done by men, circle 1; if you think it should be done by women, circle 2; if you think it should be done by both men and women, circle 3.

WHO SHOULD:

	Men 1	Women 2	Both Men & Women 3
1. Be a dishwasher in a restaurant	1	2	3
2. Be a soldier	1	2	3
3. Be a parking lot attendant	1	2	3
4. Be an airplane pilot	1	2	3
5. Be a band or orchestra leader	1	2	3
6. Be a refrigerator salesperson	1	2	3
7. Be a supermarket check-out clerk	1	2	3
8. Be an artist	1	2	3
9. Be a perfume salesperson	1	2	3
10. Be a house cleaner	1	2	3
11. Be a fire fighter	1	2	3
12. Be an elevator operator	1	2	3
13. Be a telephone operator	1	2	3
14. Be a school principal	1	2	3
15. Be a jockey (ride a horse in a race)	1	2	3
16. Be a doctor	1	2	3
17. Be a bus driver	1	2	3
18. Be President of the United States	1	2	3
19. Be an interior decorator (decorate a room in a house)	1	2	3

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Men 1	Women 2	Both Men & Women 3
20. Be a football game broadcaster	1	2	3
21. Be an elementary school teacher	1	2	3
22. Be an auto mechanic (fix cars)	1	2	3
23. Be a telephone installer	1	2	3
24. Be a librarian	1	2	3
25. Be a professional cheerleader	1	2	3
26. Be a cook in a restaurant	1	2	3
27. Be a babysitter	1	2	3
28. Be a traffic director	1	2	3
29. Be a shoe repairer	1	2	3
30. Be a secretary	1	2	3
31. Be a supermarket owner	1	2	3
32. Be a plumber	1	2	3
33. Be a nurse	1	2	3
34. Be a banker	1	2	3
35. Be a writer	1	2	3
36. Be a geographer	1	2	3
37. Be a lawyer	1	2	3
38. Be a mail carrier	1	2	3
39. Be a ballet dancer	1	2	3
40. Be a truck driver	1	2	3
41. Be a factory owner	1	2	3
42. Be a hair stylist	1	2	3
43. Be a farmer	1	2	3
44. Be a construction worker	1	2	3

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Men 1	Women 2	Both Men & Women 3
45. Be an engineer	1	2	3
46. Be a scientist	1	2	3
47. Be a baker	1	2	3
48. Be a chemist	1	2	3
49. Be a police officer	1	2	3
50. Be a janitor	1	2	3
51. Be a computer builder	1	2	3
52. Be an architect	1	2	3
53. Be a dentist	1	2	3
54. Be a comedian	1	2	3
55. Be a mathematician	1	2	3
56. Be a professional athlete	1	2	3
57. Be an umpire	1	2	3
58. Be a garbage collector	1	2	3
59. Be a dental assistant	1	2	3
60. Be a U.S. Supreme Court Judge	1	2	3
61. Be a ship captain	1	2	3
62. Be a spy	1	2	3
63. Be a jewelry maker	1	2	3
64. Be a florist (arrange and sell flowers)	1	2	3

PLEASE STOP

ID#: ___ ___ ___ ___
Wave: _____
Form: 1 0 8b

WHO SHOULD...

Here is a list of activities that people can do. We want you to tell us if you think each activity should be done by boys, by girls, or by both boys and girls. There are no right or wrong answers. We just want to know who you think should do these activities. If you think it should be done by boys, circle 1; if you think it should be done by girls, circle 2; if you think it should be done by both boys and girls, circle 3.

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3
1. wash the dishes	1	2	3
2. fly a model plane	1	2	3
3. knit a sweater	1	2	3
4. iron clothes	1	2	3
5. act in a play	1	2	3
6. build forts	1	2	3
7. go bowling	1	2	3
8. sew from a pattern	1	2	3
9. paint pictures	1	2	3
10. vacuum a house	1	2	3
11. go fishing	1	2	3
12. go to the beach	1	2	3
13. go horseback riding	1	2	3
14. wash clothes	1	2	3
15. fix a car	1	2	3
16. practice cheerleading	1	2	3
17. build with tools	1	2	3
18. cook dinner	1	2	3
19. play marbles	1	2	3
20. work jigsaw puzzles	1	2	3
21. twirl a baton	1	2	3

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3
22. play cards	1	2	3
23. go skating	1	2	3
24. play pool	1	2	3
25. wash a car	1	2	3
26. jump rope	1	2	3
27. play tag	1	2	3
28. set the table for dinner	1	2	3
29. collect baseball cards	1	2	3
30. fix bicycles	1	2	3
31. go to the movies	1	2	3
32. play darts	1	2	3
33. do gymnastics	1	2	3
34. use a microscope	1	2	3
35. make jewelry	1	2	3
36. listen to music	1	2	3
37. play dodgeball	1	2	3
38. play chess	1	2	3
39. play a musical instrument	1	2	3
40. ride a bicycle	1	2	3
41. play hop scotch	1	2	3
42. read books	1	2	3
43. play checkers	1	2	3
44. play hide and seek	1	2	3
45. watch soap operas	1	2	3
46. watch National Geographic specials	1	2	3

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3
47. watch crime/detective shows	1	2	3
48. watch game/quiz shows	1	2	3
49. babysit	1	2	3
50. write poems	1	2	3
51. take ballet lessons	1	2	3
52. play video games	1	2	3
53. draw buildings	1	2	3
54. hunt	1	2	3
55. shoot a bow and arrow	1	2	3
56. bake cookies	1	2	3
57. sketch (or design) clothes	1	2	3
58. use a chemistry set	1	2	3
59. grocery shop	1	2	3
60. draw (or design) cars/rockets	1	2	3
61. play basketball	1	2	3
62. build model airplanes	1	2	3
63. do crossword puzzles	1	2	3
64. use maps	1	2	3
65. sing	1	2	3
66. watch or listen to sports	1	2	3

ID#: ___ ___ ___ ___
Wave: _____
Form: 1 0 8c

WHO SHOULD...

Here is a list of words that describe people. Please circle the number that shows who you think should be this way. Again, there are no right or wrong answers. We want to know who you think should be this way. If you think just boys should be this way, circle 1; if you think just girls should be this way, circle 2; if you think both boys and girls should be this way, circle 3; and if you think neither boys nor girls should be this way, circle 4.

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3	Neither Boys nor Girls 4
1. be emotional (express feelings)	1	2	3	4
2. be weak	1	2	3	4
3. be aggressive	1	2	3	4
4. be happy	1	2	3	4
5. be excitable	1	2	3	4
6. be strong	1	2	3	4
7. be dependent	1	2	3	4
8. be ambitious (work hard to get ahead)	1	2	3	4
9. be sentimental	1	2	3	4
10. be adventurous	1	2	3	4
11. be affectionate	1	2	3	4
12. be good in English	1	2	3	4
13. enjoy English	1	2	3	4
14. misbehave	1	2	3	4
15. be cruel	1	2	3	4
16. be friendly	1	2	3	4
17. be independent	1	2	3	4
18. be confident (sure of themself)	1	2	3	4
19. be logical	1	2	3	4

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3	Neither Boys nor Girls 4
20. be talkative	1	2	3	4
21. be appreciative (thankful)	1	2	3	4
22. be good in physical education (gym)	1	2	3	4
23. enjoy physical education (gym)	1	2	3	4
24. be gentle	1	2	3	4
25. be good in foreign languages	1	2	3	4
26. enjoy foreign languages	1	2	3	4
27. be good at geography	1	2	3	4
28. enjoy geography	1	2	3	4
29. complain	1	2	3	4
30. enjoy math	1	2	3	4
31. be good in math	1	2	3	4
32. be secretive	1	2	3	4
33. be dominant	1	2	3	4
34. be charming	1	2	3	4
35. brag a lot	1	2	3	4
36. be loud	1	2	3	4
37. cry a lot	1	2	3	4
38. be good in social studies	1	2	3	4
39. enjoy social studies	1	2	3	4
40. be loving	1	2	3	4
41. have good manners	1	2	3	4

PLEASE CONTINUE

ID#: ___ ___ ___ ___

WHO SHOULD:

	Boys 1	Girls 2	Both Boys & Girls 3	Neither Boys nor Girls 4
42. be jealous	1	2	3	4
43. be neat	1	2	3	4
44. be good in art	1	2	3	4
45. enjoy art	1	2	3	4
46. act as a leader	1	2	3	4
47. try to look good	1	2	3	4
48. be helpful	1	2	3	4
49. be good at science	1	2	3	4
50. enjoy science	1	2	3	4
51. be competitive	1	2	3	4
52. be creative	1	2	3	4
53. enjoy music	1	2	3	4
54. be good in music	1	2	3	4
55. be shy	1	2	3	4
56. study hard	1	2	3	4
57. be curious	1	2	3	4
58. follow directions	1	2	3	4
59. be truthful	1	2	3	4
60. be brave	1	2	3	4
61. be smart	1	2	3	4
62. be good in sports	1	2	3	4

PLEASE STOP

ID#: _ _ _ _
Wave: 1
Form: 2 0 1

MOTHER'S LIFE SITUATION SURVEY

Your Birthdate: __ __ (Month) __ __ (Day) __ __ (Year)

Please circle the appropriate number which indicates your relationship to your child participating in our study:

Natural Parent 1
Step Parent 2
Adoptive Parent 3
Foster Parent 4
Grandparent 5
Other 6

If Other, please explain _____

If you are a Step Parent, Adoptive Parent, or Foster Parent, for how long have you been so? __ __ (Years) __ __ (Months)

Please circle the appropriate number which indicates your current marital status.

Never Married 1
Married 2
Separated 3
Divorced 4
Remarried 5
Widowed 6

If you are Married, Separated, Divorced, Remarried, or Widowed for how long have you been so?

__ __ (Years) __ __ (Months)

DIRECTIONS

Your child's development and behaviors in school are related in important ways to his or her home life. Parents are the primary people who influence the child's life at home. We want to find out about some aspects of your home situation. On the following pages is a list of questions that have to do with your education and employment history, the support and help you have in running your household, and the types of activities in which your family is involved. Finally, we want to learn about how satisfied you might be with various aspects of your home situation.

ID#: _ _ _ _

1. Please circle the number below which describes the final level of education you have obtained:

Elementary school but not high school	1
Some high school	2
High school graduate	3
Some college or technical school	4
College graduate	5
Some graduate school	6
Masters degree	7
M.D., Ph.D., Ed.D., or law degree	8
Other If other, please indicate _____	9

2. This question pertains to your employment history since your sixth grader was born. Please circle the number that best represents your employment for the majority of each time period.

	Not Employed	Part-Time Employed	Full-Time Employed	Laid-Off
Birth to 2-years old	1	2	3	4
2 to 5-years old	1	2	3	4
5 to 10-years old	1	2	3	4
10-years-old to Present	1	2	3	4

ID#: _ _ _ _

3. If you are presently employed, please circle the number below which best describes your job. If your job is not described below, please write it down on the last blank line marked Other. Please circle only one response.

Clerical worker, such as bank teller, bookkeeper, secretary, typist, or mail carrier 01

Craftsman, such as baker, automobile mechanic, machinist, painter, plumber, or carpenter 02

Farmer, or farm manager 03

Laborer, such as construction worker, car washer, sanitary worker, or farm laborer 04

Manager, or administrator, such as sales manager, office manager, school administrator, or restaurant manager 05

Military service worker, such as career officer, or enlisted man or woman in the Armed Forces 06

Operative worker, such as meat cutter, assembler, machine operator, welder, or taxicab, bus, or truck driver 07

Professional worker, such as accountant, artist, registered nurse, engineer, librarian, social worker, actor, actress, athlete, politician, but not including teacher 08

Professional worker, such as clergyman, dentist, physician, lawyer, scientist, or college teacher 09

Proprietor or business owner, such as the owner of a small business, a contractor, or a restaurant owner 10

Protective service worker, such as a detective, police officer or guard, sheriff, or fire fighter 11

Sales worker, such as a salesperson, an advertising or insurance agent, or a real estate broker 12

School teacher, such as an elementary or secondary school teacher 13

Service worker, such as barber, beautician, practical nurse, private household worker, janitor, waiter, or waitress 14

Technical worker, such as draftsman, medical or dental technician, or computer programmer 15

Other 16
(Please describe _____)

ID#: _ _ _ _

4. Please circle the number which most closely represents how satisfied you are with being employed or with not being employed.

Very Dissatisfied	1
Somewhat Dissatisfied	2
Neutral	3
Somewhat Satisfied	4
Very Satisfied	5

5. If you are presently employed, please circle the number which best represents how satisfied you are with the following aspects of your job:

	Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
Salary	1	2	3	4	5
Hours	1	2	3	4	5
Responsibility	1	2	3	4	5
Status	1	2	3	4	5

6. Whether you are employed or not, there are no doubt many tasks that you face each day (for example, those related to being a wife, mother, employee, or community volunteer). We would like you to rate the degree of difficulty you find in trying to balance all of your various roles. Do you find it to be:

Easy all the time	1
Easy most of the time	2
Easy half of the time; difficult half of the time	3
Difficult most of the time	4
Difficult all of the time	5

ID#: _ _ _ _

7. Which response best describes the division of labor in your home with respect to household chores?

Mother does major share of household chores	1
Father does major share of household chores	2
Children do major share of household chores	3
Housekeeper/paid employee does major share of household chores	4
Mother and father share the household chores equally	5
Entire family divides the household chores	6
Other (please indicate _____)	7

8. Which response best describes who usually does the child care activities in your family?

Mother does major share of child care activities	1
Father does major share of child care activities	2
Older child does major share of child care activities	3
Babysitter/paid employee does major share of child care activities	4
Mother and father share child care activities equally	5
Entire family divides the child care activities	6
Other (please indicate _____)	7

9. What do you think about the amount of homework your child gets?

Gets too much	1
Gets the right amount	2
Doesn't get enough	3

ID#: _ _ _ _

10. How often does your child bring homework home?

1-2 nights per week	1
2-3 nights per week	2
3-4 nights per week	3
4-5 nights per week	4
Never	5
Don't know	6

11. When your child brings homework home, where does he/she usually do it?

His/her room	1
Kitchen table	2
Special study area	3
In front of the TV	4
Other (Please specify _____)	5
Don't know	6

12. How often do you help your child (e.g., available for questions, check answers) while he/she is doing homework)?

Always	1
Sometimes	2
Never	3

13. <u>During the school week</u> how often do you eat breakfast with your children?

Everyday	1
Sometimes	2
Never	3

ID#: _ _ _ _

14. Please circle the response which most closely represents how satisfied you are with each of the following aspects of family life:

	Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied	Does Not Apply
Division of labor for household chores	1	2	3	4	5	6
Division of labor for child care activities	1	2	3	4	5	6
Husband's employment	1	2	3	4	5	6
Husband's salary	1	2	3	4	5	6
Husband's employment hours	1	2	3	4	5	6
Husband's employment responsibilities	1	2	3	4	5	6
Husband's status at his place of employment	1	2	3	4	5	6
Your child's satisfaction with your employment situation	1	2	3	4	5	6

Comments: If you are dissatisfied with any of the above, please indicate why:

_____

_____

_____

_____

_____

_____

ID#: _ _ _ _

15. The next set of questions are about things that may affect your general health. Please tell us if any of these have applied to you over the last six months.

OVER THE LAST SIX MONTHS:	Yes	No
Have you ever needed a strong cup of coffee first thing in the morning to calm your nerves?	1	0
Have you ever needed to exercise regularly to feel good?	1	0
Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye-opener)?	1	0
Have people annoyed you by criticizing your eating habits?	1	0
Have people annoyed you by criticizing your drinking habits?	1	0
Have people annoyed you by criticizing your smoking habits?	1	0
Have you ever felt bad or guilty about your drinking?	1	0
Have you ever felt you ought to cut down on your eating?	1	0
Have you ever felt you ought to cut down on your drinking?	1	0

My overall health is. . . . . (Choose one):

Excellent 1
Good 2
Fair 3
Poor 4

THANK YOU VERY MUCH. Any additional comments about yourself or your family that you would care to provide would be most welcome and appreciated.

_____

_____

_____

_____

_____