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The Impact of Adolescent Pregnancy and Childbearing Experiences on Adolescent Psychosocial Development

Kwisun Huh

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THE IMPACT OF ADOLESCENT PREGNANCY AND CHILDBEARING EXPERIENCES ON ADOLESCENT PSYCHOSOCIAL DEVELOPMENT

by

Kwisun Huh

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1993
The Lord is my strength and my shield;
My heart trusts in Him,
and I am helped;
Therefore my heart exults,
And with my song I shall thank Him.

_Psalm 28:7_
ACKNOWLEDGMENTS

Studying in a foreign country is a long way of struggling over frustrations, many obstacles, and mostly with yourself. It needed far more perseverance and patience than I expected. To overcome these and complete my dissertation, I am indebted to a large number of people. First, I would like to express my thanks to Dr. Glendon Casto, my chair, for his assistance and guidance. Thanks to Drs. Brent Miller and Randy Jones for their suggestions, resources, and support. Thanks to Drs. Karl White and Mark Innocenti for my experiences at the Early Intervention Research Institute and their support. It was a wonderful experience working at EIRI and being able to broaden my research interests and skills. Thanks to Dr. Richard Knight for his interest in my study and the encouragement. I am also grateful to Dr. Gerald Adams, who trained and challenged me in my first phase of graduate study in the United States of America.

I would like to thank the counselors at Washington High School, Jenny Hall, Lynne Dopps, and Viky Taylor, for their invaluable help in the data collection process and all of the subjects who shared valuable information about themselves. I would also like to thank Mary Ellen Heiner for preparing this manuscript.

I am also thankful to my many American friends, Marcia, Paul, Layne, Mae and Merv, Eyre, Don, and many others who have been supportive and understood me in spite of the cultural differences. Without their warm friendships and concern for me, I could not have survived a sometimes weary existence in a foreign country.
A very special thanks goes to my mother, Bok-kyung, Lee, and to my father, Saekang, Huh, who have always been supportive and self-sacrificing in their support of my long academic career. They are the ones who taught me what was important in my life and raised me with a sound value system. Without my parents' belief in me, I would not have been able to accomplish my goal. Also, thanks to my brothers and sister for their support and their respective academic achievements which have challenged me to reach higher.

Finally, a most special thanks goes to my family. My children, Jihyun and Hyun-gu, have been my most precious source of strength. Especially to Jihyun, I appreciate the patience and affections she has shown me through the last difficult years. Although she does not understand what a Ph.D is, I hope that she will be proud of me when she does. To my husband, Gu-young, I express my heartfelt thanks and love. He has stood by and trusted in me in spite of his own frustrations and the extra struggle he has had to face in the nontraditional husband's role.

Kwisun Huh
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<td>1</td>
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ABSTRACT

The Impact of Adolescent Pregnancy and Childbearing Experiences on Adolescent Psychosocial Development

by

Kwisun Huh, Doctor of Philosophy
Utah State University, 1993

Major Professor: Dr. Glendon Casto
Department: Psychology

Despite the number of teen pregnancy studies in the past, there is a dearth of empirical data relevant to the issue of psychological aid/or developmental changes in adolescent mothers. Most previous studies have addressed the negative and devastating impact of teen pregnancy on adolescent development. The premise of these early studies was that adolescents have pathological reasons for becoming pregnant. Contrary to these studies, an underlying assumption of this study was that teen pregnancy as a life crisis could entail the same facilitating and inhibiting factors that emerge with other adolescent life crises. Based on Erikson's theoretical framework, this study investigated the impacts of adolescent pregnancy and childbearing experiences on adolescent identity formation and on psychosocial stage development.

Data were collected from 64 (34 childbearing, 30 nonpregnant) high school adolescent girls before and after childbirth. The EOM-EIS
(Extended Objective Measure of Ego Identity Status) and EPSI (Erikson Psychosocial Stage Inventory) were used in this study.

Analyses of pretest data showed that there were no differences between pregnant and nonpregnant adolescents. Results indicated that there were no differences on psychosocial variables between pregnant adolescents and nonpregnant adolescents with similar demographic backgrounds.

The childbearing adolescents demonstrated decreases in foreclosure scores on identity status and increases in trust, industry, and intimacy scores on psychosocial stages. The results indicate that childbearing experiences may have enhanced the adolescents' ability to resolve their earlier developmental stage crises and conflicts.

(86 pages)
CHAPTER I
INTRODUCTION

Statement of Problem

The experience of being a mother represents a major developmental transition for all women, regardless of age. It is a time of new demands and challenges that may lead to possible changes in values, attitudes, and behaviors. Pregnancy may also have an enduring impact on the future life course. However, when pregnancy happens too early in the life cycle, or if it happens under the wrong circumstances, pregnancy can create unexpected stress and complications.

Although the birth rate for adolescent childbearing is declining, there has been a rise in teen pregnancies because of the increasing number of teens in the population (Moore, 1989), and pregnancy among adolescents is still considered a major social problem in the United States. The current trend is that the majority of pregnant teenagers elect to carry their pregnancy to term and to raise their babies. A major concern relative to childbearing among teens is that teenagers themselves are still growing and maturing. Adolescence is a time of substantial physical and psychological changes, and some teens must confront being pregnant along with confronting the developmental tasks of their own age.

Despite the many teen pregnancy studies in the past, there is a dearth of empirical data relevant to the issue of psychological and/or developmental changes in adolescent mothers (Robbins, Kaplan, & Martin, 1985). Most previous studies have investigated the educational,
occupational, economic, familial, and social outcomes of teen pregnancy, and certain developmental aspects of their infants (Cutrona & Troutman, 1986; Furstenberg, 1976; Liberman, 1980; Miller & Moore, 1990; Presser, 1981). However, mostly based on clinical observations, many researchers have viewed the impacts of childbearing experiences on the psychological and developmental change of adolescent mothers as devastating experiences, having negative impacts, or as factors inhibiting their psychological development (Black & DeBlassie, 1985; Copeland, 1981; Cutrona & Troutman, 1986; Furstenberg, 1980; Liberman, 1980; Presser, 1981; Protinsky, Sporakowski, & Atkins, 1982).

Furthermore, while many teen pregnancy studies mention the negative impact of early pregnancy and childbearing experiences on identity formation in adolescence (Black & DeBlassie, 1985; Copeland, 1981; Liberman, 1980; Protinsky et al., 1982; Schneider, 1982), there are no empirical studies testing this assumption.

However, there are a few researchers who ascribe to the view that teen pregnancy could be a positive experience. In this view, pregnancy can represent a chance for growth depending on the individual's psychological and developmental status (Buchholz & Gol, 1986; Cvetkovich & Grote, 1980; Polsby, 1974). This contradictory view obviously highlights the lack of empirical information in this area. Keeping the development of the adolescent mothers in mind, it seems important to examine the consequences and the impacts of adolescent pregnancy from a developmental perspective in an attempt to arrive at a broader, perhaps more balanced, vantage point.
The problem is that little research has utilized existing theoretical frameworks of development in studying adolescent childbearing, and no empirical research has investigated the issue of identity and psychosocial development in adolescent mothers. Inasmuch as adolescent sexuality and subsequent pregnancy and childbearing among adolescents have been occurring with increasing precocity and frequency (Moore, 1989), it would be advantageous to consider what impact, if any, pregnancy and childbearing experiences have upon the psychosocial development of these girls. Additionally, with increasing efforts directed toward prevention and intervention for pregnant and parenting adolescents, intervention efforts could benefit from a better understanding of the psychological and developmental changes brought about by the childbearing experience.

Purpose of the Study

The purpose of this study was to investigate the impact of adolescent pregnancy and childbearing experiences on (a) adolescent identity formation and (b) psychosocial stage development. It was hoped that a better understanding and further insights could be gained by utilizing Erikson's psychosocial development theory applied to teen pregnancy research, and by collecting data on pregnant and nonpregnant adolescents' psychological and developmental changes over childbearing experiences.
CHAPTER II
REVIEW OF LITERATURE

This review of literature will be limited to (a) a general review of teen pregnancy and (b) a review of identity research in teen pregnancy.

Teen Pregnancy

Teens in the United States have a higher rate of pregnancy than in any other industrialized countries (Moore, 1988). The higher pregnancy rate in the U.S. seems likely due to some combination of more sexual intercourse and/or less use of contraceptives (Chilman, 1983). Major concerns about adolescent pregnancy and childbearing have centered on the following factors:

1. There has been a rise in teenage pregnancies but not births. About one half of these pregnancies were terminated by legalized abortion in the years 1973-1977 (Chilman, 1983). Table 1 (Moore, 1989) shows that the proportion of teens becoming pregnant increased during the 1970s and has remained fairly steady during the 1980s, with about 11% of females 15-19 becoming pregnant annually. It should be noted that a small percentage of teens were unaccounted for.

Table 1
Trends in Pregnancy, Abortion, and Birth Rates Among Females 15-19

<table>
<thead>
<tr>
<th>Year</th>
<th>Becoming Pregnant</th>
<th>Having an Abortion</th>
<th>Giving Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>9.9%</td>
<td>2.7%</td>
<td>5.8%</td>
</tr>
<tr>
<td>1976</td>
<td>10.1%</td>
<td>3.4%</td>
<td>5.3%</td>
</tr>
<tr>
<td>1978</td>
<td>10.5%</td>
<td>4.0%</td>
<td>5.2%</td>
</tr>
<tr>
<td>1980</td>
<td>11.1%</td>
<td>4.3%</td>
<td>5.3%</td>
</tr>
<tr>
<td>1982</td>
<td>11.0%</td>
<td>4.3%</td>
<td>5.3%</td>
</tr>
<tr>
<td>1984</td>
<td>10.9%</td>
<td>4.3%</td>
<td>5.1%</td>
</tr>
<tr>
<td>1985</td>
<td>11.0%</td>
<td>4.4%</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
2. The proportion of teen births occurring outside of marriage has quadrupled since 1960, from 15% to 64% among black and white teens in 1987 (Moore, 1989). The proportion of illegitimate to legitimate births to white adolescents was about 5% of all babies born to them in 1955 and over 20% in 1978; for blacks, the figures were about 42% in 1955 and over 80% in 1978 (O'Connell & Moore, 1980). During the 1980s, the proportion of births occurring outside of marriage among mothers under age 20 continued to increase steadily. Statistics show that the birth rate among females aged 15-19 was 51 births per 1,000 in 1987, and nearly two thirds of these teen births were nonmarital (Moore, 1989) (Table 2).

Table 2
The Proportion of Births Occurring Outside of Marriage Among Mothers Under 20

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% Nonmarital</td>
<td>30%</td>
<td>48%</td>
<td>50%</td>
<td>51%</td>
<td>54%</td>
<td>56%</td>
<td>59%</td>
<td>61%</td>
<td>64%</td>
</tr>
</tbody>
</table>

3. Adolescent sexuality and subsequent pregnancy have been occurring with increasing precocity and frequency. Comparison of data from a 1988 survey of young men with data from a similar 1979 survey indicate that the proportion of male teens having premarital sex increased between 1979 and 1988. Three fourths of metropolitan males aged 17-19 had sex in 1988, compared with two thirds in 1979. A comparison of two surveys of teenage females indicates that the proportion of teenage females having sex increased among whites during
the 1980s. No trend is apparent among black females. Table 3 (Moore, 1989) shows that among 19-year-old females, 4 of 5 have had sex.

Table 3
The Proportion of Premarital Sex

<table>
<thead>
<tr>
<th></th>
<th>Year</th>
<th>Nonblack</th>
<th>Black</th>
<th>All Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Males Age 17-19 Who Ever Had Sex</td>
<td>1979</td>
<td>65%</td>
<td>71%</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>1988</td>
<td>73%</td>
<td>88%</td>
<td>76%</td>
</tr>
</tbody>
</table>

| Percent of Females Age 19 Who Ever Had Sex | 1982 | 69%      | 82%   |
|                                          | 1988 | 81%      | 81%   |

These statistics are alarming. It appears, based on population trends, that teenage sexuality and subsequent pregnancies will likely increase. The critical issue is that there are a great number of adolescents going through pregnancy and childbearing experiences. It is important that the impact of these experiences on the psychological well-being of the adolescent be better understood to help direct future intervention efforts.

Negative Views on Childbearing

Pregnancy and being a mother may have a major impact on a woman's life, especially when it happens in adolescence. Adolescent pregnancy often influences life direction and life work. Most pregnancies at this phase are unplanned and, at least initially, unwelcomed. There is much evidence documenting the adverse consequences of adolescent pregnancy and parenthood for the adolescents themselves. Early childbearing has been linked to lower social and economic attainment,
negative effect on educational attainment (Liberman, 1980; Presser, 1981; Hogan & Kitagawa, 1985; Yamaguchi & Kandel, 1987; Miller & Jorgensen, 1988), less prestigious jobs (Black & DeBlassie, 1985; Cutrona & Troutman, 1986), less marital stability (Furstenberg, 1976), and high welfare dependency among the adolescent parents (Chilman, 1983; Furstenberg, 1980; Miller & Moore, 1990).

As noted earlier, in much of the literature, teenage pregnancy and parenthood are associated with a wide spectrum of negative social factors ranging from lower levels of education to greater dependence on welfare and reduced opportunities for employment. Not only are teen pregnancy and parenthood viewed as having negative impacts on adolescents' development but also a number of authors relate precocious adolescent sexuality and teen pregnancy with mental illness (Clark, 1967, Schneider, 1982; Zelnik & Kantner, 1980). Such illness includes neurosis and impulsive personality disorder. A number of negative psychodynamic explanations have been offered, including rebellion against parental authority, a covert manifestation of an incestuous wish, and the need for affirmation of a sense of feminine identity (Clark, 1967; Zonker, 1977). Also, adolescent pregnancy has been linked to developmental failure, especially in identity formation and inability to attain separation-individuation (dependence-independence conflict)(Douvan & Adelson, 1966; Copeland, 1981). Buchholz and Gol (1986) have characterized the pregnant girl as reenacting a regressive symbiotic union with the preoedipal mother or attempting an oedipal resolution that is ultimately successful.
Many of these studies point out that teens who become adolescent parents are often very different from teens who avoid early parenthood. Thus adolescent mothers have long been portrayed in fiction as well as in the professional literature as socially deviant, a burden on society, and even as objects of scorn and derision. The basic assumption is that adolescents have pathological reasons for becoming pregnant (Buchholz & Gol, 1986; Clark, 1967).

Positive Views Toward Childbearing

However, these negative views should be reexamined. As Chilman (1983) argued, most studies of psychological causes of illegitimacy are markedly inadequate. There is no systematic evidence that unmarried adolescent parents are psychologically different from other adolescents of comparable demographic backgrounds. Most of these studies fail to compare unmarried mothers with young women who do not have an illegitimate child but who otherwise have similar demographic characteristics.

As Chilman (1983) indicated, young women who tend to become adolescent parents also tend to be burdened with a number of preexisting social, economic, psychological, and familial problems. Most of the traditional studies on teen pregnancy have failed to separate those preexisting variables from the outcomes of teen pregnancy and have drawn negative conclusions from these confounded studies on the impacts of teen pregnancy. Inspection of the findings presented in many studies seems to indicate that, in general, the direct social and psychological effects of early childbearing per se
appeared to be fairly minimal for young people in many aspects of their later lives (Furstenberg, Brooks-Gunn, & Phillip-Morgan, 1987).

In fact, contrary to the negative traditional view on teen pregnancy and childbearing, there are several theorists who oppose this view and propose that teen pregnancy and childbearing experiences might be potential growth experiences. These theorists suggest that teen pregnancy cannot always be viewed as an interruption of adolescent later life (Buchholz, & Gol, 1986; Friedman & Phillips, 1983; Polsby, 1974). Phipps-Yonas (1980) reviewed 170 research articles on teen pregnancy and concluded that the overriding message of the findings has been that there is no unique psychological profile common to most, much less all, pregnant adolescents. Despite teenage pregnancy being more prevalent among the lower classes, among certain minority groups, and in certain parts of the country, Phipps-Yonas (1980) found that there were no group differences in social class or racial heritage between pregnant and nonpregnant girls within a single school or community. Other researchers have demonstrated that pregnant girls differed neither from the general population of adolescents nor from a matched sample of never-pregnant girls on psychological dimensions such as self-esteem and feelings of powerlessness (Jessor & Jessor, 1975) and locus of control and purpose in life (Walters, Walters, & McKenry, 1987). Phipps-Yonas (1980) suggested that there is certainly no single "pregnant teenage" profile. While it is well-established that many teenage mothers face futures marked by instability and failure, it is not clear that their subsequent problems are consequences of their
early childbearing; they may simply represent correlates, or later components of patterns set down long before the pregnancies occurred.

Furthermore, there is some evidence that teenage mothers are not dramatically worse off than their childless peers. In some cases, having a baby may be an attempt to grow up and it may be one of the only available routes to economic independence. Pregnancy, at least for some adolescents, may represent a positive attempt at maturation. Indeed, the fact of becoming a parent is seen by some as enhancing the young mother’s ability to make a step toward a more separate and autonomous life (Buchholz & Gol, 1986).

In a 17-year follow-up study, Furstenberg et al. (1987) found somewhat different results than those based on an earlier 5-year follow-up study (Furstenberg, 1976). A reexamination of the data and a pilot study exploring changes in family functioning following adolescent pregnancy and delivery found that successful adaptation was related to support provided by families in the form of financial assistance and provision of child care. In most of the families observed, pregnancy raised the status of the teenage mother in her family. Teenage pregnancy has been seen as an opportunity for a family to reduce role ambiguity during a time of transition, when roles are shifting and there is a renegotiation of family rules.

Many of the potential negative consequences of adolescent childbearing have their roots in the multiple developmental and situational life deficits imposed by poverty, racism, and a complex society rather than in the specific age of pregnancy. In general, early childbearing would seem chiefly to add to the vulnerabilities of
an already troubled population of young people. As Furstenberg et al. (1987, p. 75) suggested, it seems that the common and the oft-cited statement that "ninety percent of her life script is written for her" when a girl has a child at the age of 16 is something of an exaggeration.

Recently, revisionist scholars reexamined the adverse effects of teenage childbearing. On the basis of recent studies, Luker (1991) questioned the proposition that teenage childbearing necessarily produces devastating or even negative outcomes for young mothers. She argues that early childbearing may be an adaptive family solution to problems faced by disadvantaged young people--racial discrimination and economic marginality. Geronimus (1991, 1992) also hypothesized that the early childbearing may be an adaptive strategy as a collective or cultural rationality within extremely socioeconomically disadvantaged populations. In recent debate, Furstenberg (1991, 1992) concurred with the revisionist's view that the adverse consequences of early childbearing have been exaggerated and that selectivity has been underestimated.

In sum, it seems that pregnancy in adolescence is more likely coincidental than pathological. The fact that pregnant adolescents are not different from nonpregnant adolescents on psychological dimensions has numerous implications for researchers and human service professionals at policy, planning, and direct service levels. Using these assumptions, research in teen pregnancy could become more objective and balanced, and could have better explanations and a healthier understanding of this population.
Identity Research in Teen Pregnancy

The central developmental task of adolescents is the search for who they are and who they will become (i.e., identity). If pregnancy happens in adolescence, this normative developmental task may be complicated. Becoming a parent can be highly stressful for adults and this transition is undoubtedly more stressful when it occurs during adolescence. Undesired early pregnancy could create severe stress, threaten the adolescent's need for privacy, and inhibit one's identity development (Cutrona & Troutman, 1986). The adolescent must now be concerned with tasks related to the successful pregnancy and its outcome, reorienting relationships to insure a place for a child, and learning the task of becoming a mother rather than their age-related developmental tasks. Pregnancy also seems to bring a need to be dependent on the adult world (de Anda, 1983; Protinsky et al., 1982). However, this dependence is in conflict with the adolescents' efforts to be independent.

A great deal of literature has appeared regarding the devastating impacts of teen pregnancy and parenthood on adolescents' psychological development and/or their identity formation. Unfortunately most of the literature is based on personal opinion rather that empirical studies. Thus, there is little systematic information available that a single pregnancy leads to a failure of psychosocial and identity development in adolescent mothers.
Erikson's Psychosocial Stage Development and Identity

Erik Erikson (1968) set forth a theory of ego development to account for the interactions between psychological, social, historical, and developmental factors in the formation of personality. Erikson (1968) viewed individual development as occurring within a social context where social expectations require a selection from available choices, with the individual, in turn, needing confirmation of choices and community acceptance.

Erikson (1968) postulated eight developmental stages of the life cycle. In his psychosocial stage development theory, the human organism develops through developmental phases, each of which is characterized by a phase-specific task or crisis. Each life stage provides a crucial period (crisis) of increased vulnerability and heightened potential for growth based on an ontogenetic evolution. Healthy development implies that each stage comes to its ascendance, meets its crisis, and finds an effective and meaningful solution. Failure at any stage might be expected to adversely affect later stages. His first six stages are listed below:

<table>
<thead>
<tr>
<th>Developmental Stages</th>
<th>Basic Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Infancy</td>
<td>Trust vs. mistrust</td>
</tr>
<tr>
<td>2. Early childhood</td>
<td>Autonomy vs. shame, doubt</td>
</tr>
<tr>
<td>3. Preschool</td>
<td>Initiative vs. guilt</td>
</tr>
<tr>
<td>4. School age</td>
<td>Industry vs. inferiority</td>
</tr>
<tr>
<td>5. Adolescence</td>
<td>Identity vs. identity confusion</td>
</tr>
<tr>
<td>6. Young adulthood</td>
<td>Intimacy vs. isolation</td>
</tr>
</tbody>
</table>

Particularly in the fifth stage of development, Erikson (1980) saw the formation of a personal sense of identity as the cornerstone of ego development. Through a combination of factors associated with physical
change, occupational and social choices, and expectations by parents, society, and peers, the adolescent is thought to engage in a period of searching for one's identity. The question "Who am I?" is addressed over and over again during this period. In his own words, Erikson (1950) defined identity as "the accrued confidence in the inner sameness and continuity of one's meaning for others" (p. 235).

There are two major factors that contribute to identity formation during adolescence: psychosocial moratorium and crisis. Erikson (1980) argued that each society provides a scheduled time period (psychosocial moratorium) for completing identity development. During this period, the individual through free role experimentation may find a niche in some section of his society, a niche which is firmly defined and yet seems to be uniquely made for him. In finding this niche the adolescent gains an assured sense of inner continuity and social sameness which will bridge what he was as a child and what he is about to become, and will reconcile his conception of himself and his community's recognition of him (Erikson, 1980).

As a critical phase of life, the psychosocial moratorium is accompanied by a sense of crisis. In Erikson's psychosocial stage development, crisis is defined as a normative life event designating "a necessary turning point, a crucial moment, when development must move one way or another, marshalling resources of growth, recovery, and further differentiation" (Erikson, 1968, p. 16). Considerable dis-equilibrium and crisis can herald the beginning of new growth processes. Erikson (1968) held that human growth is based on the dialectic struggle of inner and outer forces in which each stage of
life involves a crisis or turning point. Crisis is a time when one is turned upside down and inside out. None of the usual ways of coping work in handling the new situation. This means that one can either regress into child-like ways of behavior, or develop more mature ways of coping.

As a complex psychological construct, identity has a variety of functions. Waterman (1985) summarized these from many of Erikson's writings and discussions of identity. These include:

1. Providing subjective continuity between the individual's past, present, and anticipated future.

2. Providing a mechanism for synthesizing the identifications with parents, peers, and models provided by the society with the expectations coming from significant others and with the person's own inclinations and talents.

3. Providing a framework or structure for the organizing and integrating of behaviors across diverse aspects of one's life, thus facilitating behavioral consistency across situations.

4. Helping to protect the individual against the experience of sudden discontinuities that could arise either from biological development or from events in one's social environment.

5. Providing a direction for one's life and the motivation for those behaviors through which one implements one's personal sense of identity.
Identity as a Psychological Construct: Marcia's Identity Statuses

While several operationalizations of Erikson's theoretical statements have emerged, the most widely accepted has been provided by Marcia (1966, 1976). Marcia (1980) construed identity as a self-structure:

An internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history. The better developed this structure is, the more aware individuals appear to be of their own uniqueness and similarity to others, and of their own strengths and weaknesses in making their way in the world. The less developed this structure is, the more confused individuals seem about their own distinctiveness from others and the more they have to rely on external sources to evaluate themselves. (p. 159)

Building upon Erikson's work, Marcia (1966, 1976) developed the identity status approach to studying the process of identity formation. Marcia's four identity statuses occupy unique positions along the dimensions of exploration and commitment (Figure 1).

![Identity statuses diagram](image)

**Figure 1.** Identity statuses.

Marcia (1966) defined exploration as the adolescent's period of engagement in choosing among meaningful alternatives, while commitment
is defined as the degree of personal investment the individual exhibits. As a psychological construct, identity statuses are both outcomes of the process of identity formation and structural properties of the personality, and each portrays a dominant mode of experiencing the world (Patterson, Sochting, & Marcia, 1992).

Identity diffusion is the least developmentally advanced status. Commitment to an internally consistent set of values and goals is absent, and exploration is either missing or shallow. Identity foreclosure represents a high level of commitment following little or no exploration. People in the foreclosure status adopt a single set of values and goals, usually those of their parents. Moratorium status refers to the process of forging an identity—occupational, interpersonal, and ideological commitments—from the myriad of possibilities available. The person in moratorium is intensely preoccupied with exploring options and working toward commitment. Identity achievement represents an autonomous resolution of identity, incorporating a set of commitments adopted during a period of exploration (moratorium).

Since Marcia (1966, 1976) operationalized identity, numerous researchers have been concerned with demonstrating the affective, cognitive, and behavioral consequences associated with identity formation. Identity has become the fundamental framework for understanding and explaining many aspects of adolescent development and behaviors. Table 4 presents a summary of the major studies in identity and adolescent development. This table, which starts on the next page, is grouped by studies. The review of these studies showed that the
Table 4

A Summary of Major Studies on Identity and Psychological Factors

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Focus of Study</th>
<th>Findings, Results (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiess, R. H. (1984)</td>
<td>114, 19- to 75-year-old females</td>
<td>Cognitive development</td>
<td>Higher identity status (achievement and moratorium) subjects scored significantly higher on the Kuhn cognitive development test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Authoritarianism and Rigidity</td>
</tr>
<tr>
<td>Bennion, L. D., &amp; Adams, G. R. (1986)</td>
<td>106 college students</td>
<td>Authoritarianism and rigidity</td>
<td>Foreclosure was significantly correlated with authoritarianism, while diffusion was negatively correlated. Achievement was positively correlated with a measure of rigidity.</td>
</tr>
<tr>
<td>Adams, G. R., Montemayor, R., &amp; Brown, B. B. (1989)</td>
<td>108 college students</td>
<td></td>
<td>Diffused and foreclosed youths were more authoritarian, while moratorium and identity achieved youths were more mastery focused and reported greater self-acceptance. Regressive identity development over 3 years was associated with an authoritarian attitude upon entering college.</td>
</tr>
<tr>
<td>Adams, G. R., Shea, J., &amp; Fitch, S. A. (1979)</td>
<td>76 Nebraska college students</td>
<td>Psychosocial, moral, and ego development</td>
<td>Foreclosure status subjects scored higher on measures of authoritarianism and rigidity than other statuses. Identity achieved subjects scored significantly higher on a self-acceptance scale than foreclosed or diffused subjects.</td>
</tr>
<tr>
<td>Bennion, L. D. (1988)</td>
<td>60 16-year-old adolescents</td>
<td></td>
<td>Achievement scores positively correlated with a positive adjustment scale, while diffusion scores were found to be negatively correlated.</td>
</tr>
<tr>
<td>Author</td>
<td>Sample</td>
<td>Focus of Study</td>
<td>Findings, Results (Outcomes)</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>----------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Mead, V. H. (1983)</td>
<td>797 traditional and 543 nontraditional college students</td>
<td></td>
<td>Achieved subjects scored significantly higher on a self-actualization scale than diffused and foreclosed subjects.</td>
</tr>
<tr>
<td>Owen, R. G. (1984)</td>
<td>39 Cuban and 39 white freshmen and sophomores</td>
<td></td>
<td>Achieved subjects showed significant differences as compared to foreclosed subjects on the psychosocial development scale.</td>
</tr>
<tr>
<td>Jones, R. (1984)</td>
<td>137, 9th and 12th graders</td>
<td></td>
<td>Locus of control, self-perceptions, and self-esteem</td>
</tr>
<tr>
<td>Abraham, K. G. (1983)</td>
<td>223, 9th and 12th graders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Francis, S. J. (1981)</td>
<td>353 college freshmen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read, D., Adams, G. R., &amp; Dobson, W. R. (1984)</td>
<td>80 female college students</td>
<td>Social cognitive style and social satisfaction</td>
<td>Foreclosed subjects were less likely to be analytical or philosophical than subjects in other identity statuses.</td>
</tr>
<tr>
<td>Adams, G. R., Ryan, J. H., Hoffman, J. J., Dobson, W. R., &amp; Neilson, E. C. (1985)</td>
<td>80 randomly selected college students from a pool of 646 students</td>
<td></td>
<td>Uncommitted status subjects experienced greater social anxiety. Achieved men were more relaxed, less worried, and less extreme in their introversion or extroversion. Foreclosed women were easily confused, more likely to narrow their perceptual system and to be interpersonally restricted.</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Focus of Study</th>
<th>Findings, Results (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Francis, S. J. (1981)</td>
<td>353 college freshmen</td>
<td></td>
<td>Achieved and moratorium subjects showed significantly lower levels of social satisfaction than did diffused subjects.</td>
</tr>
<tr>
<td>Waterman, A. S., &amp; Waterman, C. K. (1972)</td>
<td>College students</td>
<td></td>
<td>Moratorium students tend to be more dissatisfied with their existing social environment.</td>
</tr>
<tr>
<td>Francis, S. J. (1981)</td>
<td>353 college students</td>
<td>Behaviors: Achievement increases, conformity behaviors, social influence behaviors, and substance use and exposure</td>
<td>Achieved students have a higher GPA than diffused or diffused-moratorium subjects.</td>
</tr>
<tr>
<td>Rodman, M. (1983)</td>
<td>65 18- to 23-year-old college students</td>
<td></td>
<td>No significant differences between identity statuses and GPA.</td>
</tr>
<tr>
<td>Adams, G. R., Ryan, J. H., Hoffman, J. J., Dobson, W. R., &amp; Neilson, E. C. (1985)</td>
<td>80 randomly selected college students from a pool of 646 students</td>
<td></td>
<td>Diffused subjects were more likely to conform to peer pressures during an experimental task than other identity statuses subjects.</td>
</tr>
<tr>
<td>Read, D., Adams, G. R., &amp; Dobson, W. R. (1984)</td>
<td>80 female college students</td>
<td></td>
<td>Achieved status subjects as compared to other identity status individuals, exhibited more assertive structuring behaviors while using minimal amounts of deception.</td>
</tr>
<tr>
<td>Jones, R. M., &amp; Hartman, B. R. (1984)</td>
<td>137 9th and 12th graders</td>
<td></td>
<td>Achieved and diffused subjects were more likely than foreclosed individuals to have been exposed to marijuana and cigarettes. Achieved and moratorium subjects reported more experience with cigarettes, marijuana, alcohol, heroin, inhalants, than did individuals in other identity statuses.</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Focus of Study</th>
<th>Findings, Results (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, G. R., Montemayor, R., &amp; Brown, B. B. (1989)</td>
<td>108 college students, 3-year longitudinal study</td>
<td>Family Factors: Family environment, parenting style, and parental identity status</td>
<td>The progressive identity development was associated with low levels of parental use of both rejection-control and withdrawal in childrearing behaviors and less focus on companionship by parents with their youths. The stable and regressive identity development were associated with higher parental use of rejection control, withdrawal in behavior, and greater companionship demands.</td>
</tr>
<tr>
<td>Adams, G. R. (1985)</td>
<td>45 families of parent and adolescent daughter triads</td>
<td></td>
<td>Diffused and foreclosed subjects perceived significantly more rejection from parents while achieved and moratorium daughters perceived significantly more companionship, affection, and support from fathers.</td>
</tr>
<tr>
<td>Adams, G. R., &amp; Jones, R. M. (1983)</td>
<td>82 female high school students</td>
<td></td>
<td>Diffused and foreclosed adolescents perceive more parental rejection and parental control or regulating behavior than achieved or moratorium adolescents.</td>
</tr>
<tr>
<td>Campbell, E., Adams, G. R., &amp; Dobson, W. R. (1983)</td>
<td>83 adolescent males and 203 adolescent females</td>
<td></td>
<td>Foreclosed adolescents were more likely to report affectionate relationship with their parents. Diffused adolescents were observed to be least emotionally attached to their parent and were limited independence.</td>
</tr>
<tr>
<td>Grotevant, H. D., &amp; Cooper, C. R. (1985)</td>
<td>84 Caucasian families of parent, adolescent, and 1 or 2 siblings</td>
<td></td>
<td>Families with relatively higher levels of individuality (separateness, distinction of self from others and self-assertion, expressing one's own point of view) and moderate levels of connectedness (mutuality and sensitivity to and respect for other's view and permeability, openness and responsiveness to others views) have adolescents who develop more advanced forms of identity.</td>
</tr>
</tbody>
</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Focus of Study</th>
<th>Findings, Results (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meilman (1979)</td>
<td>Twenty-five 12-, 15-, 18-, 21-, and 24-year-old males</td>
<td>Developmental data: Cross-sectional and longitudinal</td>
<td>On overall identity status, there were large increases with age in the number of subjects in the achievement status and decreases in the number of subjects in the foreclosure and diffusion statuses.</td>
</tr>
<tr>
<td>Abraham (1984)</td>
<td>870 9th to 12th graders</td>
<td></td>
<td>Ninth and 10th graders were significantly more likely to be moratorium and foreclosed statuses than 11th and 12th graders.</td>
</tr>
<tr>
<td>Adams, G. R., Shea, J., &amp; Fitch, S. A. (1979)</td>
<td>88 male and 84 female college students</td>
<td></td>
<td>A significant main effect for age was found. Younger males tended to be more diffused or foreclosed. Older males were more likely to be achieved or in moratorium. No significant age by sex relationship was found.</td>
</tr>
<tr>
<td>Campbell, E., Adams, G. R., &amp; Dobson, W. R. (1983)</td>
<td>83 adolescent males, 203 adolescent females</td>
<td></td>
<td>Younger adolescents were significantly more likely to be diffused and older adolescents were significantly less likely to be diffused.</td>
</tr>
<tr>
<td>Mead, V. H. (1983)</td>
<td>797 traditional and 543 nontraditional college students</td>
<td></td>
<td>Higher class rank (year in school) correlated with mature identity statuses.</td>
</tr>
<tr>
<td>Adams, G. R., Montemayor, R., &amp; Brown, B. B. (1989)</td>
<td>108 college students, 3-year longitudinal study</td>
<td></td>
<td>Three general patterns of identity development were identified over a 3-year period: progressive, stable, and regressive trajectories.</td>
</tr>
</tbody>
</table>
more mature identity statuses are correlated with increasingly mature cognitive abilities, improved psychosocial development, more effective and adaptive social cognition styles, and more achievement-oriented behaviors.

Similarly, Waterman (1992) also reviewed the empirical research on identity over the past 25 years to claim that identity has an aspect of an optimal psychological functioning, and concluded that:

1. A sense of identity is associated with personal well-being in the form of self-esteem and self-acceptance and relative absence of debilitating emotional states such as anxiety and depression.

2. A sense of identity is associated with goal-directed activity both in terms of goal setting and in the sophistication of cognitive functioning necessary for success in achieving the goals set.

3. A sense of identity is perceived as a positive quality to possess.

4. A sense of identity is associated with pursuit of socially constructive ends in terms of attitudes of tolerance/social acceptance, cooperation/helping, and seeking of intimate personal relationships.

Summary

Erikson (1956) noted that the early crystallization of the ego-identity can, and most likely will, become subject to renewed conflict through changes in diverse factors (such as expansions in mental abilities, new opportunities, and changing social demands) that will stimulate a new normative identity crisis that will compel the individual to once again change identity. Therefore, identity is not formed exclusively in adolescence. The ego is thought to synthesize
and resynthesize throughout the lifetime. The process has been referred to as evolving configuration of identity (Erikson, 1968). Consistent with Erikson's view on identity, Marcia (1976) wrote that identity status should not be viewed as a static quality but should be viewed in more fluid and developmental ways. Although individuals may reflect one status at a particular point in their life, identity formation is a dynamic process and over a lifetime an individual may change and be classified into many different identity statuses.

Pregnancy and being a parent is another kind of life crisis, regardless of age or marital status. When one adds the strains of pregnancy to the crisis of adolescence, it seems a doubly difficult burden. Having to go through the struggle of finding a direction for one's life at the same time as accepting the responsibilities of parenting can create major problems and conflicts. Such a situation can be disruptive to both the parent and the child. However, the adjustment and conflicts that result may depend on the individual's personality, life circumstances, and the individual's level of maturity at the beginning of and during the process.

Despite the number of teen pregnancy studies in the past, there are few data relevant to many of the questions that a developmental psychologist might raise regarding adolescent mothers. In much of the literature, teenage pregnancy and parenthood are associated with negative social factors, such as lower levels of education, greater dependence on welfare, and reduced opportunities for employment. Also many researchers suggest that the impact of teenage pregnancy and parenthood is devastating to adolescents' psychological development.
and/or their identity formation. A few researchers argue that teen pregnancy might include a potential growth experience. However, none of these views have been empirically studied. Most teenage pregnancy research provides descriptive information on the differences between pregnant and nonpregnant adolescents or consists of correlational studies of factors related to teen pregnancy. Frequently, the measures used are confounded by effects due to socioeconomic status, and conclusions are biased by psychodynamic explanations.

The study described herein moves beyond the atheoretical research of group differences among nonpregnant versus pregnant adolescents to a theory-based assessment of individual developmental change as a result of the experience of teen pregnancy and childbearing. An underlying assumption of this study was that the experience of teen pregnancy as a life crisis could entail the same facilitating and inhibiting factors that emerge with other adolescent life crises.

According to Erikson's psychosocial stage development theory, crisis could be resolved in positive ways depending on one's developmental status, and other family resources and supports. Also with the concept of the psychosocial moratorium, the incident of adolescent pregnancy could be viewed differently. Young adolescents might engage in sexual activity as a way of finding, examining, and/or exploring their sex roles, gender identity, intimate relationships, or personal identity. Socially, adolescents are not allowed to experiment with sexual relationships or/and parenting. This occurs in spite of the fact that modern society offers adolescents the institutionalized moratorium period of exploring and examining roles in other areas.
This study investigated the impact of adolescent pregnancy and childbearing experiences on identity and psychosocial stage development. Additionally, as noted in the literature review, demographic variables were examined to investigate the differences, if any, between childbearing and nonpregnant adolescents.

Hypotheses

The purpose of this study was to investigate the influence of adolescent pregnancy and childbearing experiences on adolescent identity formation and psychosocial stage development. The research questions of this study were:

1. What is the impact of adolescent pregnancy and childbearing experiences on identity formation?

2. What is the impact of adolescent pregnancy and childbearing experiences on psychosocial stage development?

Based upon the literature review above, the following hypotheses in relation with two research questions were tested.

**Hypothesis I:** Following childbirth, there will be no differences between nonpregnant and childbearing adolescents on identity achievement scores, moratorium scores, foreclosed scores, and diffused scores as measured by EOM-EIS after controlling for pretest differences.

**Hypothesis II:** Following childbirth, there will be no differences between nonpregnant adolescents and childbearing adolescents on scores of trust, autonomy, initiative, industry, identity, and intimacy as measured by the EPSI after controlling for pretest differences.
CHAPTER III
METHODS

Sample

Subjects for this study were recruited from an alternative high school in Ogden, Utah. Washington High School serves both Ogden and Weber school districts, and the student body consists of students who, for a variety of reasons, had unsuccessful school experiences, and who were at high risk for dropping out of the educational system. As part of the educational program, the school has a Young Mothers Program and a nursery for the adolescents' infants and preschool children during school hours. The nursery provides a child development experience for the young mother as part of credit earned towards graduation. This program was implemented by the two school districts to assist pregnant adolescents and adolescent mothers in completing high school with marketable skills.

Washington High School was chosen for several reasons: first, it was more feasible to get a large enough sample of pregnant subjects for the study from this school than other regular high school; second, the student body of Washington High School had a variety of ethnic groups with similar demographic backgrounds; third, school staff members were already familiar with the investigator's institute through another project so that it was easier to get support from the faculty.

Subjects were recruited through school counselors and classroom teachers. For nonpregnant subjects, the information about the study, testing date, and the sign-up sheet were posted on the school bulletin
board. For childbearing subjects, all pregnant girls at the high school were informed about the study through counselors and the Young Mother classroom teacher. Counselors recruited childbearing subjects who met the following criteria: (a) it was their first pregnancy (except one subject); (b) the pregnancy was in second through third trimester; and (c) they were not married.

Ninety subjects (45 childbearing and 45 nonpregnant) participated in this study. The average age of the respondents was 16.8 years old with a range of 13.9 to 18.9 years. Fifty-seven percent of the subjects were White, 29% Hispanic, 8% Black and the rest were of mixed ethnicity. A table comparing the groups on all demographic variables appears on page 40.

Procedures for Data Collection

Data were collected at two times: before (pretest) and after (posttest) child birth. For the pretest, subjects in both groups who agreed to participate were informed of the group testing date through the classroom teachers and counselors. Subjects were administered the questionnaires in a group testing session and individual informed consent forms (see Appendix C) were completed at this time. Upon completion of each test, subjects were given $5 for their participation. The average time between testings was 4.9 months for both groups.

At posttest, 34 childbearing and 30 nonpregnant subjects completed the assessment. Two to 3 weeks after the due date for the child's birth, each childbearing subject was contacted by telephone, and
informed about the follow-up study and the questionnaires were mailed to them.

For the nonpregnant group, 5 months after the pretest date, information about the follow-up study and the schedule for the group testing session was advertised on the bulletin board and through teachers. At this time 24 subjects completed the posttest. Since the group testing date for the posttest was during the last week of school, absent subjects were contacted by telephone and questionnaires were mailed. Six questionnaires were returned, resulting in a total of 30. Upon receiving the completed tests, a coupon of $5 was sent to the subjects as payment for their participation.

Attrition Analysis

Among 90 subjects, 34 subjects in the childbearing group and 30 subjects in the nonpregnant group completed the posttest. Reasons for nonparticipation at posttest included (by childbearing and nonpregnant, respectively): the subjects moved (2,1); were not found (2,3); could not be contacted/phones were disconnected (5,5); and did not return the tests (1,5). One subject in the control group did not complete the pretest and one subject in the childbearing group had a spontaneous abortion. These subjects were excluded from the posttest analysis.

To investigate differences between participating (remained) and nonparticipating (dropped) groups, two-way ANOVAs (group by study status) were employed using demographic variables (Table 5) and pretest psychosocial variables (Table 6). No significant interaction effects were found.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant</th>
<th></th>
<th>Childbearing</th>
<th></th>
<th>ANOVA Group by Study Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dropped</td>
<td>Remaining</td>
<td>Dropped</td>
<td>Remaining</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X (SD) n</td>
<td>X (SD) n</td>
<td>X (SD) n</td>
<td>X (SD) n</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>16.9 (.8) 14</td>
<td>17.1 (.9) 31</td>
<td>16.2 (.8) 11</td>
<td>16.9 (1.1) 34</td>
<td>1.42 .24</td>
</tr>
<tr>
<td>Grade</td>
<td>11.4 (.9) 14</td>
<td>11.4 (.8) 31</td>
<td>10.5 (1.3) 11</td>
<td>11.1 (1.4) 34</td>
<td>1.70 .19</td>
</tr>
<tr>
<td>Mother's Age</td>
<td>46.1 (6.0) 14</td>
<td>40.7 (6.7) 27</td>
<td>39.9 (4.9) 10</td>
<td>39.7 (5.2) 28</td>
<td>.00 .95</td>
</tr>
<tr>
<td>Father's Age</td>
<td>46.4 (9.7) 14</td>
<td>42.8 (7.0) 27</td>
<td>42.7 (8.5) 9</td>
<td>41.4 (7.1) 25</td>
<td>.33 .57</td>
</tr>
<tr>
<td>Mother's Education (years)</td>
<td>11.5 (2.4) 14</td>
<td>11.5 (4.0) 30</td>
<td>11.9 (2.7) 11</td>
<td>12.1 (2.3) 34</td>
<td>.27 .61</td>
</tr>
<tr>
<td>Father's Education (years)</td>
<td>11.4 (3.5) 14</td>
<td>12.7 (2.3) 24</td>
<td>11.9 (1.7) 10</td>
<td>13.5 (3.1) 31</td>
<td>.05 .82</td>
</tr>
<tr>
<td>Hours/Week Mother Employed</td>
<td>42.2 (6.7) 9</td>
<td>45.1 (9.5) 22</td>
<td>32.7 (11.4) 6</td>
<td>35.6 (14.1) 32</td>
<td>.00 .99</td>
</tr>
<tr>
<td>Hours/Week Father Employed</td>
<td>40.0 (.0) 7</td>
<td>41.4 (6.1) 16</td>
<td>31.4 (10.7) 7</td>
<td>36.0 (11.9) 27</td>
<td>.29 .59</td>
</tr>
</tbody>
</table>
### Table 6

**Attrition Analysis of Pretest Measures**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant</th>
<th>Childbearing</th>
<th>ANOVA Group by Site</th>
<th>Study Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dropped</td>
<td>Remained</td>
<td>Dropped</td>
<td>Remained</td>
</tr>
<tr>
<td><strong>The Extended Version of</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Objective Measure of Ego</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity Status (EOH-EIS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion</td>
<td>52.8 (5.9)</td>
<td>52.4 (10.9)</td>
<td>52.9 (5.6)</td>
<td>52.5 (7.0)</td>
</tr>
<tr>
<td>Foreclosed</td>
<td>39.3 (9.9)</td>
<td>39.5 (11.0)</td>
<td>41.9 (14.5)</td>
<td>38.1 (13.1)</td>
</tr>
<tr>
<td>Moratorium</td>
<td>58.2 (7.3)</td>
<td>56.5 (7.0)</td>
<td>54.9 (10.5)</td>
<td>56.2 (8.6)</td>
</tr>
<tr>
<td>Achievement</td>
<td>62.1 (9.6)</td>
<td>65.8 (9.7)</td>
<td>60.8 (7.8)</td>
<td>61.1 (8.4)</td>
</tr>
<tr>
<td><strong>Erickson Psychosocial Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inventory (EPSI)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>2.9 (.66)</td>
<td>3.5 (.53)</td>
<td>3.1 (.29)</td>
<td>3.5 (.61)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.5 (.54)</td>
<td>4.0 (.54)</td>
<td>3.4 (.53)</td>
<td>3.8 (.47)</td>
</tr>
<tr>
<td>Initiative</td>
<td>3.4 (.50)</td>
<td>3.8 (.43)</td>
<td>3.4 (.67)</td>
<td>3.6 (.52)</td>
</tr>
<tr>
<td>Industry</td>
<td>3.4 (.46)</td>
<td>3.9 (.38)</td>
<td>3.5 (.36)</td>
<td>3.8 (.55)</td>
</tr>
<tr>
<td>Identity</td>
<td>3.3 (.61)</td>
<td>3.7 (.50)</td>
<td>3.4 (.45)</td>
<td>3.8 (.56)</td>
</tr>
<tr>
<td>Intimacy</td>
<td>3.6 (.53)</td>
<td>3.9 (.50)</td>
<td>3.4 (.53)</td>
<td>3.7 (.65)</td>
</tr>
</tbody>
</table>
Measures

Extended Objective Measure of Ego-Identity Status (EOM-EIS-II)

This self-report measure (see Appendix A) is a revision by Bennion and Adams (1986) of an earlier form called the Extended Objective Measure of Ego Identity Status (EOM-EIS-I, Grotevant & Adams, 1984). The instrument is designed to measure Marcia's (1966) ideological domain and interpersonal issues in identity development. Ideological dimensions include occupational, political, religious, and philosophical commitment and exploration. Interpersonal dimensions include friendship, dating, sex role, and recreational commitments and exploration. There are two questions for each of the eight dimensions for each of the four identity statuses (achievement, moratorium, foreclosure, diffusion) for a total of 64 questions.

The EOM-EIS employs a Likert scale format ranging from 1 (strongly agree) to 6 (strongly disagree). Scoring results in an identity status scale score for both the ideological and the interpersonal domains as well as an overall identity status. Bennion and Adams (1986) provided a thorough report of reliability and validity data for their revision of the EOM-EIS. Estimates of internal consistency were generated using Cronbach alphas which ranged from .58 to .80 for the eight ideological and interpersonal subscales, indicating moderate internal consistency. Analyses of the revised instrument showed evidence of acceptable to good convergent, discriminant, concurrent, and predictive validity. Recently, Adams, Bennion, and Huh (1987) compiled the reliability and validity estimates from approximately 30 studies that utilized one of
the versions of the EOM-EIS and reported similar levels of reliability. Predictive validity estimates included family environment factors (family environment, parent-adolescent affection, and parental identity status), social cognition (authoritarianism, moral and psychosocial development, and self-esteem), and social behavior (conformity behaviors, social influence behavior, and substance use). In approximately 45 reported relationships between EOM-EIS generated identity statuses and other related constructs, 75% were theoretically consistent.

**Erikson Psychosocial Stage Inventory (EPSI)**

The EPSI (Rosenthal, Gurney, & Moore, 1981) (see Appendix B) consists of six subscales based on Erikson's first six stages of psychosocial development. Each subscale consists of 12 items, 6 reflecting successful and 6 reflecting unsuccessful resolution of the "crisis" of the stage, for a total of 72 items. Respondents are asked to select an appropriate response for each item based on a Likert scale ranging from 5 (almost always true) to 1 (hardly ever true).

Rosenthal et al. (1981) reported reliability and validity data for EPSI using two samples of adolescents from nine Melbourne high schools. Reliability data were reported for each sub-scale with Alpha coefficients ranging from .57 to .75. Interscale correlations for each subscale were moderate and significant with each preceding subscale. Construct validity was examined through an analysis of differences between sexes and older and younger respondents. Analysis revealed that older students scored higher in a positive direction on each
subscale, consistent with Eriksonian theory. Regarding sex differences, males scored higher on autonomy and identity; females scored higher on intimacy. Thus, initial studies indicated promising results in terms of reliability and validity of the inventory.

Psychometric Properties

Ability to test hypotheses is based upon reliability and validity of measures used. Although the above reliability and validity information supports that the two measures are sound enough to use, it is essential to estimate the psychometric properties of measurement to assure acceptable levels of reliability and, when possible, evidence of validity within the confines of the available sample.

Reliability

Reliability was estimated for subscales of EOM-EIS and EPSI. Internal consistency was estimated using Cronbach alpha coefficients, while test-retest reliabilities were estimated using Pearson r correlation coefficients. These estimates are summarized in Table 7.

Internal consistency of EOM-EIS subscales for the pretest was calculated by Cronbach alpha; estimates ranged from .51 to .84. Test-retest reliabilities of EOM-EIS subscales were estimated with Pearson r correlations between pretest and posttest scores for each subscale, and ranged from .48 to .59. These results are consistent with reports by Adams et al. (1987) who reported internal consistency for the EOM-EIS ranging from .60 to .80, and .76 for mean test-retest reliabilities over a 4-week period. Since the interval between pretest and posttest in this study was longer than that of Adams et al.'s (1987) interval
Table 7

Estimates of Internal Consistency and Test-Retest Reliability

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Test-Retest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Extended Version of Objective Measure of Ego Identity Status (EOM-EIS)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion</td>
<td>.51</td>
<td>.62</td>
<td>.48</td>
</tr>
<tr>
<td>Foreclosed</td>
<td>.84</td>
<td>.85</td>
<td>.54</td>
</tr>
<tr>
<td>Moratorium</td>
<td>.50</td>
<td>.46</td>
<td>.50</td>
</tr>
<tr>
<td>Achievement</td>
<td>.68</td>
<td>.76</td>
<td>.59</td>
</tr>
<tr>
<td><strong>Erikson Psychosocial Stage Inventory (EPSI)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.68</td>
<td>.76</td>
<td>.61</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.67</td>
<td>.66</td>
<td>.62</td>
</tr>
<tr>
<td>Initiative</td>
<td>.65</td>
<td>.75</td>
<td>.59</td>
</tr>
<tr>
<td>Industry</td>
<td>.62</td>
<td>.76</td>
<td>.57</td>
</tr>
<tr>
<td>Identity</td>
<td>.71</td>
<td>.73</td>
<td>.52</td>
</tr>
<tr>
<td>Intimacy</td>
<td>.63</td>
<td>.66</td>
<td>.60</td>
</tr>
</tbody>
</table>

\( ^{a} \) Cronbach Alpha for Subscales

\( ^{b} \) Pearson Correlation Coefficient Between Pretest and Posttest

for test-retest reliability, the slightly lower correlation is not surprising. However, the data of this study yielded a comparable range of alpha coefficients that reflects acceptable internal consistency. Cronbach alphas for the EPSI subscales ranged from .62 to .71 and test-retest reliabilities ranged from .52 to .62. These alpha coefficients are similar to those reported by Rosenthal et al. (1981) and were deemed appropriate for this study. Overall, estimates of internal consistency and test-retest reliabilities were acceptable and indicated that the two measures were somewhat consistent.

**Validity**

Convergent and discriminant validity was estimated by correlating subscales within a measure. These correlation coefficients are presented in Table 8. The correlations are generally consistent with...
Table 8
Correlation Coefficients Between Subscales of EOM-EIS and EPSI and Between Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Foreclosed</th>
<th>Moratorium</th>
<th>Achievement</th>
<th>Trust</th>
<th>Autonomy</th>
<th>Initiative</th>
<th>Industry</th>
<th>Identity</th>
<th>Intimacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Extended Version of Objective Measure of Ego Identity Status (EOM-EIS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion</td>
<td>.16</td>
<td>.41***</td>
<td>-.23**</td>
<td>-.24**</td>
<td>-.16</td>
<td>-.33***</td>
<td>-.08</td>
<td>-.29**</td>
<td>-.30**</td>
</tr>
<tr>
<td>Foreclosed</td>
<td>.38**</td>
<td>.06</td>
<td>-.09</td>
<td>-.20*</td>
<td>-.26**</td>
<td>-.07</td>
<td>.01</td>
<td>-.25**</td>
<td></td>
</tr>
<tr>
<td>Moratorium</td>
<td>-.00</td>
<td>-.19*</td>
<td>-.04</td>
<td>-.13</td>
<td>-.01</td>
<td>-.17</td>
<td>-.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td></td>
<td>.06</td>
<td>.22*</td>
<td>.24**</td>
<td>.32***</td>
<td>.12</td>
<td>.16*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erikson Psychosocial Style Inventory Scale (EPSI)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
<td>.51***</td>
<td>.50***</td>
<td>.52***</td>
<td>.73***</td>
<td>.59***</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td></td>
<td></td>
<td>.66***</td>
<td>.62***</td>
<td>.56***</td>
<td>.54***</td>
<td>.50***</td>
<td></td>
</tr>
<tr>
<td>Initiative</td>
<td></td>
<td></td>
<td></td>
<td>.53***</td>
<td>.48***</td>
<td>.46***</td>
<td>.40***</td>
<td>.44***</td>
<td>.68***</td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p ≤ .05
** p ≤ .01
*** p ≤ .001
previous psychometric findings (Adams et al., 1987; Rosenthal et al., 1981). For the EOM-EIS, diffusion was correlated with moratorium ($r = .41$) and negatively correlated with achievement ($r = -.23$). Adams et al. (1987) reported similar correlation coefficients of diffusion with moratorium ($r = .32$) and with achievement ($r = -.39$).

For the EPSI, all subscales would be expected to positively correlate with each other in Erikson's framework. As expected, all subscales of EPSI were positively correlated to each other with correlations ranging from .44 to .73. Correlations between the trust and identity, autonomy and initiative, and identity and intimacy subscales were the strongest, thus demonstrating theoretically consistent convergence.

In the form of concurrent validity coefficients, divergent validity estimates were computed to provide a broad overview on the psychometric relationships between identity statuses of EOM-EIS and subscales of EPSI (Table 8). Evidence for divergent validity is found in the form of theoretically consistent low correlations between the subscales of the two measures. The diffusion subscale of EOM-EIS was negatively correlated with trust, initiative, identity, and intimacy subscales of EPSI. The foreclosure subscale of EOM-EIS was negatively correlated with autonomy, initiative, and intimacy subscales of EPSI. Also, additional positive correlations between subscales of two measures indicated theoretically consistent convergence between the EPSI and EOM-EIS. The achievement subscale of the EOM-EIS was positively correlated with autonomy, initiative, industry, and intimacy subscales of EPSI.
In general, expected relations between subscales of EOM-EIS and EPSI, and relations between the two measures yielded supporting validity estimates.
CHAPTER IV
RESULTS

This section will present the results of data analysis, including group comparability at pretest, and tests of hypotheses (the impact of childbearing experiences on posttest measures). All statistical analyses were conducted using SPSS/PC.

Comparability of Groups on Pretest Measures

Before testing for differences in change between groups, establishing group equivalence is important, particularly in light of the fact that it was not feasible to assign groups randomly for this kind of study. Analyses for the comparability of groups at pretest are employed to detect potential selection biases caused by nonequivalent groups. This information can also be used to control for pretest differences at posttest analysis. Results of pretest analyses are presented in Tables 9 and 10. Pretest comparisons utilized only the data of those subjects who remained at posttest. No statistically significant differences were found on demographic variables except the working hours of mothers. Mothers of nonpregnant subjects worked more hours than mothers of childbearing subjects.

On pretest measures, no statistically significant differences were found between groups in any subscales of EPSI and EOM-EIS except on the achievement subscale (Table 10). Nonpregnant respondents demonstrated higher scores on achievement status than childbearing subjects.
### Table 9

Comparison of Childbearing Group with Nonpregnant Group on Demographic Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant Group</th>
<th>Childbearing Group</th>
<th>t Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17.1 ( .8) 31</td>
<td>16.9 (1.1) 34</td>
<td>.64</td>
<td>.53</td>
</tr>
<tr>
<td>Grade</td>
<td>11.4 ( .8) 31</td>
<td>11.1 (1.4) 34</td>
<td>.93</td>
<td>.36</td>
</tr>
<tr>
<td>Mother's Age</td>
<td>40.7 (6.7) 27</td>
<td>39.7 (6.2) 28</td>
<td>.61</td>
<td>.55</td>
</tr>
<tr>
<td>Father's Age</td>
<td>42.8 (7.0) 21</td>
<td>41.4 (7.1) 25</td>
<td>.67</td>
<td>.50</td>
</tr>
<tr>
<td>Mother Education (years)</td>
<td>12.4 (2.4) 30</td>
<td>12.1 (2.3) 34</td>
<td>.43</td>
<td>.67</td>
</tr>
<tr>
<td>Father Education (years)</td>
<td>12.7 (2.3) 24</td>
<td>13.5 (3.1) 31</td>
<td>-1.10</td>
<td>.28</td>
</tr>
<tr>
<td># Previous Pregnancies</td>
<td>.03 (.2) 31</td>
<td>.06 (.2) 33</td>
<td>-.53</td>
<td>.60</td>
</tr>
<tr>
<td>Hours/Wk Mother Employed</td>
<td>45.1 (9.5) 22</td>
<td>35.6 (14.1) 32</td>
<td>2.79</td>
<td>.01</td>
</tr>
<tr>
<td>Hours/Wk Father Employed</td>
<td>41.4 (6.1) 16</td>
<td>36.0 (11.9) 27</td>
<td>1.95</td>
<td>.06</td>
</tr>
<tr>
<td>Percent Caucasian</td>
<td>45</td>
<td>65</td>
<td>1.58</td>
<td>.12</td>
</tr>
<tr>
<td>Percent Living w/ Parent</td>
<td>58</td>
<td>41</td>
<td>1.46</td>
<td>.15</td>
</tr>
</tbody>
</table>

### Table 10

Comparison of Childbearing Group with Nonpregnant Group on Pretest Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant Group</th>
<th>Childbearing Group</th>
<th>t Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Extended Version of Objective Measure of Ego Identity Status (EOM-EIS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion</td>
<td>52.4 (10.9) 30</td>
<td>52.5 (7.0) 34</td>
<td>-.04</td>
<td>.97</td>
</tr>
<tr>
<td>Foreclosed</td>
<td>39.5 (11.0) 30</td>
<td>38.1 (13.1) 34</td>
<td>.45</td>
<td>.65</td>
</tr>
<tr>
<td>Moratorium</td>
<td>56.5 (7.0) 30</td>
<td>56.2 (8.6) 34</td>
<td>.14</td>
<td>.89</td>
</tr>
<tr>
<td>Achievement</td>
<td>65.8 (9.7) 30</td>
<td>61.1 (8.4) 34</td>
<td>2.05</td>
<td>.04</td>
</tr>
<tr>
<td>Erikson Psychosocial Stage Inventory (EPSI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>3.47 (.5) 30</td>
<td>3.54 (.6) 34</td>
<td>-.53</td>
<td>.60</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.96 (.5) 30</td>
<td>3.84 (.5) 34</td>
<td>.90</td>
<td>.37</td>
</tr>
<tr>
<td>Initiative</td>
<td>3.78 (.4) 30</td>
<td>3.61 (.5) 34</td>
<td>1.43</td>
<td>.16</td>
</tr>
<tr>
<td>Industry</td>
<td>3.86 (.3) 30</td>
<td>3.79 (.5) 34</td>
<td>.59</td>
<td>.56</td>
</tr>
<tr>
<td>Identity</td>
<td>3.73 (.5) 30</td>
<td>3.76 (.6) 34</td>
<td>-.26</td>
<td>.80</td>
</tr>
<tr>
<td>Intimacy</td>
<td>3.86 (.5) 30</td>
<td>3.72 (.6) 34</td>
<td>1.03</td>
<td>.31</td>
</tr>
</tbody>
</table>
Overall, although groups were not randomly assigned, these results demonstrate that subjects in childbearing and nonpregnant groups were comparable at study initiation.

Tests of Hypotheses: Impact of Childbearing Experiences on Posttest Measures

To assess the impact of pregnancy and parenting experiences on identity formation (EOM-EIS) and Erikson's psychosocial stage development (EPSI), analysis of covariance was employed using posttest scores of EOM-EIS and EPSI subscales as dependent variables with corresponding pretest scores as covariates, and group membership (non-pregnant adolescent vs. childbearing adolescent) as the independent variable. Other demographic variables would have been considered as covariates if they were correlated with outcome variables. Although there were few group differences at pretest, analysis of covariance procedures were used to adjust minor discrepancies which were present between the two groups, and to increase the statistical power of the study by reducing error variance (Cook & Campbell, 1979).

Two hypotheses were tested. These hypotheses are restated below, and the relationships of the results to the hypotheses are summarized. Results of ANCOVA are presented in Table 11.

Hypothesis I

Following childbirth, there will be no differences between nonpregnant and childbearing adolescents on identity achievement scores, moratorium scores, foreclosure scores, and diffusion scores as measured by the EOM-EIS after controlling for pretest differences.
Table 11

Analysis of Covariance on Posttest Data with Corresponding Pretest as Covariates

<table>
<thead>
<tr>
<th>Variables</th>
<th>Nonpregnant</th>
<th>Childbearing</th>
<th>F</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X (SD) Adj.X n</td>
<td>X (SD) Adj.X n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Extended Version of Objective Measure of Ego Identity Status (EOM-EIS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diffusion</td>
<td>54.1 (11.2) 54.1 30</td>
<td>51.8 (7.9) 51.7 34</td>
<td>1.25</td>
<td>.28</td>
</tr>
<tr>
<td>Foreclosed</td>
<td>44.0 (12.5) 43.7 30</td>
<td>37.6 (11.3) 38.0 34</td>
<td>5.14</td>
<td>.03</td>
</tr>
<tr>
<td>Moratorium</td>
<td>59.1 (6.5) 59.0 30</td>
<td>56.4 (7.2) 56.4 34</td>
<td>2.94</td>
<td>.09</td>
</tr>
<tr>
<td>Achievement</td>
<td>67.8 (9.7) 66.4 30</td>
<td>63.0 (10.0) 64.4 34</td>
<td>.89</td>
<td>.35</td>
</tr>
<tr>
<td>Erikson Psychosocial Stage Inventory (EPSI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>3.37 (.5) 3.39 30</td>
<td>3.70 (.7) 3.67 34</td>
<td>5.21</td>
<td>.03</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.96 (.5) 3.92 30</td>
<td>4.03 (.5) 4.07 34</td>
<td>2.37</td>
<td>.13</td>
</tr>
<tr>
<td>Initiative</td>
<td>3.89 (.6) 3.83 30</td>
<td>3.75 (.5) 3.81 34</td>
<td>.05</td>
<td>.83</td>
</tr>
<tr>
<td>Industry</td>
<td>3.83 (.6) 3.80 30</td>
<td>4.02 (.5) 4.05 34</td>
<td>4.33</td>
<td>.04</td>
</tr>
<tr>
<td>Identity</td>
<td>3.67 (.6) 3.68 30</td>
<td>3.84 (.5) 3.83 34</td>
<td>1.62</td>
<td>.21</td>
</tr>
<tr>
<td>Intimacy</td>
<td>3.78 (.6) 3.73 30</td>
<td>3.94 (.5) 3.99 34</td>
<td>5.18</td>
<td>.03</td>
</tr>
</tbody>
</table>
Results. EOM-EIS comparisons are presented in the top half of Table 11. A statistically significant difference ($p < .05$) was found for the foreclosure scale only. The childbearing adolescents obtained lower scores on foreclosure than did the nonpregnant adolescents. Posttest foreclosure scores of the childbearing adolescents decreased compared to the scores before the childbirth. Also a similar pattern was observed on moratorium scores. Childbearing adolescents demonstrated lower scores on moratorium than the nonpregnant adolescents. Scores on diffusion and achievement statuses did not yield statistically significant differences between groups.

Hypothesis II

Following childbirth, there will be no differences between nonpregnant adolescents and childbearing adolescents on scores of trust, autonomy, initiative, industry, identity, and intimacy as measured by the EPSI after controlling for pretest differences.

Results. Results of EPSI comparisons are presented in the bottom half of Table 11. Statistically significant differences ($p < .05$) were found for the trust, industry, and intimacy scales. For all three comparisons, the childbearing adolescents obtained higher scores (more positive resolution of crisis) than the nonpregnant adolescents. For autonomy, initiative, and identity, no statistically significant differences were found between groups.
CHAPTER V
DISCUSSION

This discussion will begin by summarizing the results of this study, then the implications of the results will be discussed, and finally the limitations of the study and suggestions for the future research follow.

Summary of the Results

The purpose of this study was to investigate the impacts of adolescent pregnancy and parenting experiences on adolescent identity formation and on psychosocial stage development. It was hoped that a better understanding and further insights could be gained by utilizing Erikson's psychosocial development theory applied to teen pregnancy research, and by collecting data of pregnant and nonpregnant adolescents' psychological and developmental changes over time.

Data were collected from 64 (34 childbearing, 30 nonpregnant) high school adolescent girls before and after childbirth. Hypotheses were that following childbirth, childbearing adolescents' scores on identity measures and psychosocial stages would not differ from nonpregnant adolescents'. This study found that the childbearing adolescents demonstrated decreases in scores of identity foreclosure and moratorium statuses, and increases in scores of three stages of psychosocial development: trust, industry, and intimacy. It was also found, with one exception, that there were no differences between childbearing and nonpregnant adolescents on demographic variables.
The results of this study advanced our understanding of the developmental and psychosocial changes of childbearing adolescents more than many other previous studies because of its strengths. A strength of this study was the use of a comparison group of nonpregnant adolescents with similar demographic backgrounds. Most pregnant subjects of previous studies were recruited from hospital care programs with either no comparison group, or with a comparison group of different demographic backgrounds. The problems with these studies were that the measures used were confounded by effects due to socioeconomic status and race, and their failure to separate the preexisting demographic characteristics from the outcomes of early pregnancy and motherhood.

Another strength of this study is that its data collection of pregnant adolescents' psychological and developmental changes extended over a period of time. Most previous teen pregnancy research provides descriptive and/or correlational information between pregnant and nonpregnant adolescents in which effects were focused upon the social, educational, occupational, and economic outcomes of teen pregnancy. By collecting empirical data related to a theoretical framework, this study contributes to the understanding of developmental and psychosocial changes of childbearing adolescents.

Discussion of the Results

As observed in the literature review, few empirical data exist on the psychological or developmental correlates of teenage pregnancy or motherhood. The lack of recent findings about psychological
conditions leaves professionals without needed information for case and program planning. Since teenage motherhood is increasingly more common, there appears to be a need for more information on its psychological implications.

In fact, previous conclusions that pregnant and parenting adolescents suffer major psychological distress arise from studies predating (mostly in 60s) the current tolerance for sexual activity by adolescent and unmarried women and for single parenting. Other studies seeking to identify psychological correlates of becoming a teenage mother used case studies and extrapolations of reports on characteristics of small samples of youth who became pregnant. These reports are also dated and lacked control groups of teenagers who were neither pregnant nor parents. The premise of these early investigations was that teenage mothers share similar and deleterious psychological traits (Barth, Schinke, & Maxwell, 1983).

The review of teen pregnancy literature also showed that many researchers have addressed the negative and devastating impacts of pregnancy and parenting experiences on adolescent mothers' psychological development and/or her identity development (Liberman, 1980; Protinsky et al., 1982). However, a controversy has arisen regarding the assertion that teen pregnancy might include a potential growth experience (Buchholz & Gol, 1986: Polsby, 1974). Also, other findings suggest that adolescent mothers and pregnant teenagers are less distressed by their situation than was once thought (Barth et al., 1983).
The results of this study challenge several common conceptions of adolescent pregnancy. Results indicate that adolescent childbearing experiences are not in and of themselves as psychologically incapacitating as often thought.

Focusing on identity formation, findings from the study indicate that child-bearing experiences seem to impact identity development. There was a significant decrease in the foreclosure scores of adolescents after childbearing experiences. Also the data collected on moratorium status revealed a similar change over 5 months. Nonpregnant adolescents, however, demonstrated increases in diffusion, foreclosure, and moratorium scores over the same period of time.

Contrary to Liberman's (1980) argument, the experiences of pregnancy and parenting in adolescence do not seem to inhibit identity formation. Results showed that childbearing adolescents demonstrated decrease in foreclosure and moratorium scores compared to the scores before the childbirth, while nonpregnant adolescents showed increase in foreclosure and moratorium scores within the same period of time.

It seems that having gone through pregnancy and childbearing experiences, the adolescent mothers became more committed and clarified better her defined role and responsibility.

This study also tested Erikson's psychosocial stage development theory. Liberman (1980) and Protinsky et al. (1982) assumed that parenting adolescents may not function optimally as adults because of the failure of earlier stage mastery of Erikson's tasks of adolescence. However, in Erikson's theory, resolution of crisis is not static and fixed at certain ages. Unresolved conflicts of crisis
could be worked out positively in later developmental stages. In this study, it was assumed that adolescent pregnancy is one of many other life crises rather than a pathological symptom. As a crisis and with considerable disequilibrium, adolescent pregnancy and childbearing experiences could herald the beginning of new growth processes. The results of this study support Erikson's theory that adolescents in the childbearing group demonstrated increases in scores of trust, industry, and intimacy stages over 5 months of pregnancy and childbearing experiences.

Overall, at posttest, childbearing adolescents demonstrated higher scores on psychosocial stages compared to scores before childbirth. Having a baby impacts on many aspects of a woman's life: different roles, perspectives, responsibility, work load, and relationships with other people. Especially, as a teenager herself, the adolescent mother depends on her parents or other close people for physical, emotional, and financial help. It seems that these kinds of relationships (with a baby and with family and close people) give childbearing adolescents more opportunity to work out unresolved earlier developmental conflicts of trust and intimacy, retrospectively. Also with the extra responsibility and working loads of a mother, it forces them to become more industrious. The results indicate that childbearing experiences may have enhanced the adolescents' ability to resolve their earlier developmental stage crises and conflicts.

It should be further noted that there was no evidence that experiencing pregnancy and parenting had a detrimental impact on
adolescent identity formation and psychosocial development. Rather, these results suggest that experiencing pregnancy and parenthood in adolescence could be a turning point and may represent a growth opportunity.

In addition to the main analyses, the results of pretest data analyses showed that there were no differences between pregnant and nonpregnant adolescents. Many previous studies have claimed that teens who became adolescent parents are often very different from teens who avoid early parenthood. However, the results from this study revealed that with similar demographic backgrounds, there were no differences on psychosocial variables between pregnant adolescents and nonpregnant adolescents, and this fact leads to the conclusion that these biased views on adolescent pregnancy and parenthood may be incorrect.

Conclusion

This study was one of the first attempts to investigate the psychological and developmental changes in childbearing adolescents. Contrary to the traditional views, the current study demonstrated that childbearing experience in adolescence does not necessarily negatively impact on adolescent psychosocial development and identity formation. The impact of pregnancy and parenting experiences in adolescence seems to make the adolescent parent less foreclosed. Also, results suggest that such experiences enhanced the adolescents' ability to resolve their earlier developmental stage conflicts such as trust, industry, and intimacy. Also, with similar demographic background, there were
no psychological differences between nonpregnant and pregnant adolescents.

Limitations

The results of the present study must be interpreted with caution due to methodological limitations. First, like much other teen pregnancy research, randomization was not feasible for group assignment. Along with this limitation, data were not collected before the onset of pregnancy. If data could be collected before pregnancy, it would be beneficial to understand the characteristics of pregnant adolescents compared to nonpregnant adolescents. Second, since subjects were drawn from an alternative high school, respondents were atypical of other high school students, and may represent a more troubled group than would a mainstream high school sample. These limitations suggest that these results may not be generalizable to mainstream high school adolescents. Third, measures used in this study were based on self-report. Like most self-report measures, they are only accurate to the degree that the persons are willing to express themselves honestly. Although this problem is a matter of concern, estimates of internal consistency and test-retest reliability indicate the data were relatively trustworthy and that respondents were consistently reporting their attitudes over measurement periods.

Future Research

Results from this study indicate that childbearing experiences have positive effects on identity formation and psychosocial stage
development. However, replication of this study using mainstream high school adolescents would make the results more generalizable. Furthermore, future studies should include a longitudinal design to understand the effects of childbearing experiences on the developmental and psychological changes over a longer period. The small sample size of this study made it difficult to analyze data by different identity statuses and ethnicity. Subgroup analyses would be beneficial to investigate characteristics and differences of developmental and/or psychological changes among each identity status and ethnicity. Therefore, any future study should include a larger sample with various ethnic groups to explore these questions.
REFERENCES


APPENDICES
Appendix A

Extended Objective Measure of Ego Identity Status-II
EOMEIS-II

Instructions: Read each item and indicate to what degree it reflects your own thoughts and feelings. If a statement has more than one part, please indicate your reaction to the statement as a whole. Indicate your answer on the line preceding the question number.

1 = strongly agree
2 = moderately agree
3 = agree
4 = disagree
5 = moderately disagree
6 = strongly disagree

1. I haven't chosen the occupation I really want to get into, and I'm just working at whatever is available until something better comes along.

2. When it comes to religion, I just haven't found anything that appeals and I don't really feel the need to look.

3. My ideas about men's and women's roles are identical to my parents'. What has worked for them will obviously work for me.

4. There's no single "life style" which appeals to me more than another.

5. There's a lot of different kinds of people. I'm still exploring the many possibilities to find the right kind of friends for me.

6. I sometimes join in recreational activities when asked, but I rarely try anything on my own.

7. I haven't really thought about a "dating style". I'm not too concerned whether I date or not.

8. Politics is something that I can never be too sure about because things change so fast. But I do think it's important to know what I can politically stand for and believe in.

9. I'm still trying to decide how capable I am as a person and what jobs will be right for me.

10. I don't give religion much thought and it doesn't bother me one way or the other.
11. There are so many ways to divide responsibilities in marriage, I'm trying to decide what will work for me.

12. I'm looking for an acceptable perspective for my own "lifestyle" view, but I haven't found it yet.

13. There are many reasons for friendship, but I choose my close friends on the basis of certain values and similarities that I've personally decided on.

14. While I don't have one recreational activity I'm really committed to, I'm experiencing numerous possibilities in marriage, I'm trying to decide what will work for me.

15. Based on past experiences, I've chosen the type of dating relationship I want now.

16. I haven't really considered politics. It just doesn't excite me much.

17. I might have thought about a lot of different jobs, but there's never really been any question since my parents said what they wanted.

18. A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe.

19. I've never really seriously considered men's and women's roles in marriage. It just doesn't seem to concern me.

20. After considerable thought I've developed my own individual viewpoint of what is for me an ideal "lifestyle" and don't believe anyone will be likely to change my perspective.

21. My parents know what's best for me in terms of how to choose my friends.

22. I've chosen one or more recreational activities to engage in regularly from lots of things and I'm satisfied with those choices.

23. I don't think about dating much. I just kind of take it as it comes.

24. I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such.

25. I'm really not interested in finding the right job, any job will do. I just seem to flow with what is available.
26. I'm not so sure what religion means to me. I'd like to make up my mind but I'm not done looking yet.

27. My ideas about men's and women's roles came right from my parents and family. I haven't seen any need to look further.

28. My own views on a desirable life style were taught to me by my parents and I don't see any need to question what they taught me.

29. I don't have any real close friends, and I don't think I'm looking for one right now.

30. Sometimes I join in leisure activities, but I really don't see a need to look for a particular activity to do regularly.

31. I'm trying out different types of dating relationships. I just haven't decided what is best for me.

32. There are so many different political parties and ideals. I can't decide which to follow until I figure it all out.

33. It took me a while to figure it out, but now I really know what I want for a career.

34. Religion is confusing to me right now. I keep changing my views on what is right and wrong for me.

35. I've spent some time thinking about men's and women's roles in marriage and I've decided what will work best for me.

36. In finding an acceptable viewpoint to life itself, I find myself engaging in a lot of discussions with others and some self-exploration.

37. I only pick friends my parents would approve of.

38. I've always liked doing the same recreational activities my parents do and haven't ever seriously considered anything else.

39. I only go out with the type of people my parents expect me to date.

40. I've thought my political beliefs through and realize I can agree with some and not other aspects of what my parents believe.
41. My parents decided a long time ago what I should go into for employment and I'm following through their plans.

42. I've gone through a period of serious questions about faith and can now say I understand what I believe in as an individual.

43. I've been thinking about the roles that husbands and wives play a lot these days, and I'm trying to make a final decision.

44. My parents' views on life are good enough for me, I don't need anything else.

45. I've tried many different friendships and now I have a clear idea of what I look for in a friend.

46. After trying a lot of different recreational activities I've found one or more I really enjoy doing by myself or with friends.

47. My preferences about dating are still in the process of developing. I haven't fully decided yet.

48. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.

49. It took me a long time to decide but now I know for sure what direction to move in for a career.

50. I attend the same church my family has always attended. I've never really questioned why.

51. There are many ways that married couples can divide up family responsibilities. I've thought about lots of ways and now I know exactly how I want it to happen for me.

52. I guess I just kind of enjoy life in general, and I don't see myself living by any particular viewpoint to life.

53. I don't have any close friends. I just like to hang around with the crowd.

54. I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for some time to come.

55. I've dated different types of people and now know exactly what my own "unwritten rules" for dating are and who I will date.
56. I really have never been involved in politics enough to have made a firm stand one way or the other.

57. I just can't decide what to do for an occupation. There are so many that have possibilities.

58. I've never really questioned my religion. If it's right for my parents it must be right for me.

59. Opinions on men's and women's roles seem so varied that I don't think much about it.

60. After a lot of self-examination I have established a very definite view on what my own lifestyle will be.

61. I really don't know what kind of friend is best for me. I'm trying to figure out exactly what friendship means to me.

62. All of my recreational preferences I got from my parents and I haven't really tried anything else.

63. I date only people my parents would approve of.

64. My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.
Appendix B

Erikson Psychosocial Stage Inventory
**EPSI**

Read each item and indicate to what degree it reflects your own thoughts and feelings. Choose your response from 1 to 5 and mark on the right number following the question.

<table>
<thead>
<tr>
<th></th>
<th>hardly ever true</th>
<th>almost always true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am able to take things as they come</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. I can't make sense of my life</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. I wish I had more self-control</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. I get embarrassed when someone begins to tell me personal things</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. I can't make up my own mind about things</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6. I am able to take things as they come</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. I am able to be first with new ideas</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8. I'm never going to get on in this world</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>9. I'm ready to get involved with a special person</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>10. I've got a clear idea of what I want to be</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>11. I feel mixed up</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>12. I find the world a very confusing place</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>13. I know when to please myself and when to please others</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>14. The important things in life are clear to me</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>15. I don't seem to be able to achieve my ambitions</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>16. I don't seem to have the ability that most others have got</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>17. I've got it together</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>18. I know what kind of person I am</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>19. I worry about losing control of my feelings</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>20. I have few doubts about myself</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>21. I rely on other people to give me ideas</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>22. I don't enjoy working</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>23. I think I must be basically bad</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>24. Other people understand me</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>25. I'm a hard worker</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
26. I feel guilty about many things
27. I'm warm and friendly
28. I really believe in myself
29. I can't decide what I want to do with my life
30. It's important to me to be completely open with my friends
31. I find that good things never last long
32. I feel I am a useful person to have around
33. I keep what I really think and feel to myself
34. I'm an energetic person who does lots of things
35. I'm trying hard to achieve my goals
36. Things and people usually turn out well for me
37. I have a strong sense of what it means to be female/male
38. I think the world and people in it are basically good
39. I am ashamed of myself
40. I'm good at my work
41. I think it's crazy to get too involved with people
42. People are out to get me
43. I like myself and am proud of what I stand for
44. I don't really know what I'm all about
45. I can't stand lazy people
46. I can stop myself doing things I shouldn't be doing
47. I care deeply for others
48. I find I have to keep up a front when I'm with people
49. I find myself denying things even though they are true
50. I don't really feel involved
51. I waste a lot of my time messing around
52. I'm as good as other people
53. I like to make my own choices
54. I don't feel confident of my judgment
55. I'm basically a loner
56. I cope very well
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>58.</td>
<td>I'm not much good at things that need brains or skill</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>59.</td>
<td>I have a close physical and emotional relationship with another person</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>60.</td>
<td>I stick with things until they're finished</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>61.</td>
<td>I'm a follower rather than a leader</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>62.</td>
<td>I can stand on my own to two feet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>63.</td>
<td>I find it hard to make up my mind</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>64.</td>
<td>I trust people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>65.</td>
<td>I like my freedom and don't want to be tied down</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>66.</td>
<td>I like new adventures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>67.</td>
<td>I prefer not to show too much of myself to others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>68.</td>
<td>I don't get things finished</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>69.</td>
<td>I like finding out about new things or places</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>70.</td>
<td>I don't get much done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>71.</td>
<td>Being alone with other people makes me feel uncomfortable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>72.</td>
<td>I find it easy to make close friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix C

Personal Consent Forms
PERSONAL CONSENT FORM

I have agreed to participate in a research study to be conducted by Utah State University. I understand that the purpose of the research is to study the phases of adolescent development.

Having been informed about the adolescent development project, I, _______________________, hereby consent for the personnel of this project to contact my teachers and to review my school file for information. I understand that the contacting of my teachers will be done by appropriate project personnel and the obtained information will be kept confidential.

I also agree to have EIRI staff conduct psychological testing on me. This testing will include the following tests:

1. EPSI (Erikson Psychosocial Inventory Scale)
2. EOMEIS-II (Extended Version of the Objective Measure of Ego Identity Status)

The results of these tests will be used in a research study and all information gathered will remain confidential. I also understand that I may withdraw from the study at any time without prejudice. If I have further questions, I understand I may contact Kwisun Huh (801-750-3685).

_________________________________________  __________________________________________
Date                                               Signature for Personal Consent

_________________________________________  __________________________________________
Date                                               Witness
PERSONAL CONSENT FORM

I have agreed to participate in a research study to be conducted by Utah State University. I understand that the purpose of the research is to study the phases of adolescent development.

I, ____________________________, hereby give my permission for staff of the Early Intervention Research Institute at Utah State University to contact my teachers and to review my school file as part of their research on the impacts of childbearing experiences on adolescent development. I understand that the contacting of my teachers will be done by appropriate project personnel and the obtained information will be kept confidential.

I also agree to have EIRI staff conduct psychological testing on me. This testing will include the following tests:

1. EPSI (Erikson Psychosocial Inventory Scale)
2. EOMEIS-II (Extended Version of the Objective Measure of Ego Identity Status)

The results of these tests will be used in a research study and all information gathered will remain confidential. I also understand that I may withdraw from the study at any time without prejudice. If I have any further questions, I understand I may contact Kwisun Huh (801-750-3685).

Date ______________________ Signature for Personal Consent ______________________

Date ______________________ Witness ______________________
Please fill out this address and phone number form. It will be helpful for us when we need to contact you.

1. Your Name: ____________________________________________
   Current Address: _________________________________________
   Home Phone Number: ______ Work Phone Number: ________

2. Mother or Father's Name: ________________________________
   Their Address: _________________________________________
   Home Phone Number: ______ Work Phone Number: ________

3. Name of a Close Friend: _________________________________
   Their Address: _________________________________________
   Home Phone Number: ______ Work Phone Number: ________

4. Name of Baby's Father (optional): _________________________
   His Address: _________________________________________
   Home Phone Number: ______ Work Phone Number: ________

5. Name of a close relative or significant other (e.g., social worker, physician, probation officer): ___________________
   Their Address: _________________________________________
   Home Phone Number: ______ Work Phone Number: ________
VITA

Kwisun Huh

ADDRESSES:

Work

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Logan, UT 84321-6580
Phone: (801) 750-3685

Home

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Seoul, 156-020
Korea

EDUCATION

Ph.D. Psychology, Developmental Psychology, Utah State University, Logan, UT, 1993
M.A. Educational Psychology, Seoul Women's University, Seoul, Korea, 1984
B.A. Education/Psychology, Seoul Women's University, Seoul, Korea, 1981

PROFESSIONAL EXPERIENCE

1987-present Graduate Research Assistant, Early Intervention Research Institute, Utah State University Affiliated Center for Persons with Disabilities.

Spring, 1988 Instructor, Department of Family and Human Development, Utah State University

Winter, 1988 Teaching Assistant, Department of Family and Human Development, Utah State University

1985-1988 Graduate Research Assistant, Laboratory for Research on Adolescent, Department of Family and Human Development, Utah State University

1984-1985 Instructor, Department of Education, Cheongju University, Cheongju, Korea

1984-1985 Instructor, Department of Family Study and Home Economics, Dae-jun College, Dae-jun, Korea
1984-1985  Graduate Research Assistant, Counseling Center at Seoul Women's University, Seoul, Korea

1982-1984  Teaching Assistant, Department of Educational Psychology, Seoul Women's University, Seoul, Korea


1981-1982  Graduate Research Assistant, Women's Study Center, Seoul Women's University, Seoul, Korea

1981-1982  Teacher, Seoul Girl's High School, Seoul, Korea

PUBLICATIONS


WORK IN PREPARATION


Innocenti, M. S., & Huh, K. A comparative study on the child and family effects of adding a parent involvement program to an existing early intervention program.

Innocenti, M. S., & Huh, K. A study of family supports effects on families and children with disabilities.
PRESENTATIONS AND WORKSHOPS


PROFESSIONAL MEMBERSHIPS

Member, Society for Research on Adolescence
Member, National Council on Family Relations
Member, American Education Research Association
Member, Society for Research in Child Development