Adolescent Pregnancy and Parenthood: Recent Evidence and Future Directions

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Abstract

This paper presents an overview of recent research and theory concerning adolescent sexual activity, pregnancy, and parenthood. Although the rate of teenage childbearing has decreased substantially since mid-century, increasing proportions of teenage mothers who are unmarried and receiving welfare have raised public concern about repercussions of young parenthood. New research with innovative methodologies is discussed which suggests that many of the negative outcomes of teenage mothers previously ascribed to mothers' age are as much causes or correlates of teenage pregnancy as effects of it, although this claim is less substantiated regarding the effects of teenage parenthood on the children of teenage mothers. Literature on the fathers and grandmothers of such children is summarized, and suggestions made for furthering this research. An overview is given of intervention programs, with a focus on successful efforts at deferring sexuality and pregnancy in adolescents and on aiding teenage mothers on welfare. Finally, policy implications for teenage mothers and their children of the new federal welfare law are considered. Throughout this review, focus is given to the relative dearth of knowledge on the psychological precursors and consequences of adolescent pregnancy and parenthood.

Adolescent Pregnancy and Parenthood: Recent Evidence and Future Directions

Trends in Teenage Pregnancies and Births

Adolescent pregnancy has long been a societal concern, but in the past decade, this issue has become one of the most frequently cited examples of the perceived societal decay in the U.S. (U.S. House of Representatives, 1996). In 1990, 1,040,000 girls under the age of 20 became pregnant, approximately 530,000 (51%) of whom gave birth (Alan Guttmacher Institute, 1994). Ironically, the rate of births to teenagers is much lower now than it has been throughout much of the twentieth century. Between 1960 and 1985 the rate of births to teenage girls declined substantially, falling from 89.1 births per 1000 teenagers ages 15-19 in 1960 to 51.0 in 1985. In the late 1980's the rate increased to a recent high of 62.1 in 1991, but then declined again in the 1990's to 56.8 births per 1000 15-19 year old girls in 1995 (U.S. Department of Health and Human Services, 1995; Ventura, Martin, Curtin, & Mathews, 1997). Most of the births to teenagers are concentrated in the later years of adolescence: rates for older girls, ages 18-19, are more than double those in mid adolescence, ages 15-17. The rates for girls under 15 are too low to provide detailed statistics in most reports (1.3 per 1000 girls aged 10-14 in 1995; Rosenberg, Ventura, Maurer, Heuser, & Freedman, 1996; Ventura et al., 1997).

There are also large differences among girls of different racial and ethnic groups. White[1] girls have considerably lower rates of adolescent births (39.3 per 1000 15-19 year olds in 1995) than Hispanics[2] (106.7) or African Americans (99.3; Ventura et al., 1997). While childbearing rates in white and African American populations have shown substantial declines, rates for Hispanic girls have risen steadily in the past fifteen years. Although Latina girls have lower rates of early sexual experience, they are less likely to use birth control and, once pregnant, less likely to abort than white and African American girls (Perez & Duany, 1992).

Although adolescent birth rates in the U.S. have declined in recent decades, they remain in stark contrast to those in other industrialized nations. Even though U.S. teenagers do not exhibit significantly different patterns of sexual activity compared to adolescents in many industrialized countries, they contracept less consistently and effectively, and thus birth rates are much higher than elsewhere. In fact, at the beginning of this decade, the rate of teenage births was almost twice as high in the U.S. as in the country with the next highest rate, Great Britain, over 4 times greater than those of Sweden and Spain, seven times greater than those of Denmark and the Netherlands, and 15 times greater than the rate in Japan (United Nations, 1991). While some researchers argue that our ethnic diversity is largely responsible for these differences, the birth rate of white girls in the U.S. still easily surpasses every other industrialized nation (United Nations, 1991).

If birth rates to adolescents are significantly lower now than in the 1960's and 1970's, why has this become such a major policy concern in the past decade? Two reasons are paramount: links with (1) nonmarital childbearing, and (2) welfare dependence. First, while the total rate of births to teenagers has decreased substantially since mid-century, the ratio of nonmarital teenage births has soared, from a small minority of 15% of all births to teenagers ages 15-19 in 1960 to a strong majority of 75% in 1995. These percentages are significantly higher for African Americans (95% in 1995) than whites (68%) or Hispanics (67%; Ventura et al., 1997). Girls who become unwed mothers as teenagers are also likely to have additional children outside of wedlock in their 20's, adding to the growing proportion of all births which are nonmarital (Foster & Hoffman, 1996). Second, our nation has become increasingly concerned about families' use of welfare (Temporary Assistance for Needy Families,

TANF) and persistent childhood poverty (U.S. House of Representatives, 1996). A sizable portion of teenage mothers are poor, and they are also likely to spend extended spells of time on welfare (Bane & Ellwood, 1986). Because of these long spells, teenage mothers receive a disproportionate amount of welfare funding over their life course. For example, although teenage mothers only represent a minority of the welfare caseload at any particular time, overall, 53% of welfare funding is spent on families formed by a teenage birth (Alan Guttmacher Institute, 1994).

We draw attention, however, to the fact that both of these concerns could be seen as slightly misguided when directed solely at adolescents. Although teenagers accounted for 30% of nonmarital births in 1992, and girls under age 18 for only 13%, women in their twenties accounted for 54% of nonmarital births. Similarly, 73% of never-married teenage mothers go on welfare within 5 years of giving birth, but so do 66% of never-married mothers in their early twenties (Foster & Hoffman, 1996; Koppelman, 1994).

Causes and Correlates of Teen Pregnancies

Individual, Family, and Neighborhood Characteristics

Numerous individual, family, and neighborhood characteristics predispose girls to become young single mothers. Girls who are poor students with low educational aspirations are more likely to become teenage mothers than their high-achieving peers; in fact, one third of teenage mothers drop out of school before becoming pregnant (Maynard, 1995). Teenage pregnancy is also linked to other problematic adolescent behaviors such as alcohol and drug use and, not surprisingly, to early initiation of sexual activity (Horwitz, Klerman, Kuo, & Jekel, 1991b; Paikoff, 1995; Peterson, & Crockett, 1992; Urdy, Kovenock, & Morris, 1996). Girls who are raised in poverty, by single parents, and by parents with low educational attainment are also prone to teenage parenthood (Brewster, Billy, & Grady, 1993; Cherlin, Kiernan, & Chase-Lansdale, in press; Furstenberg & Teitler, 1994; Maynard, 1995). Indeed, in 1988 60% of adolescent mothers lived in poverty at the time of the birth (Alan Guttmacher Institute, 1994). Finally, teenagers who reside in communities with high rates of poverty, welfare use, and single-mother households are also at higher risk (Wilson, 1987).

The reasons and processes behind these correlations are numerous, but are often hypothesized to revolve around experiences of poverty and resulting perceptions of limited life options and choices. (Brewster et al., 1993; Luker, 1996; Wilson, 1987). Life experiences associated with poverty, such as alienation at school, prevalent models of unmarried parenthood and unemployment, and lack of educational opportunities and stable career prospects, all serve to lower the perceived costs of early motherhood (Brewster et al., 1993; Luker, 1996; Moore, Morrison, & Glei, 1995). Similarly, structural issues also play a role. The U.S. economy has lost most of its low-skill, high paying manufacturing jobs, and higher education is increasingly necessary for living-wage employment (Wilson, 1996). This change has not only affected the stability of the inner cities and the working poor, but has also changed the face of the teenage and early 20 years, such that the median ages of school completion, marriage, and childbearing have all increased substantially for the middle-class population (Cherlin, 1992; Rosenheim & Testa, 1992). However, low income populations have not adapted to these critical changes by delaying their family formation activities (Rosenheim and Testa, 1992). Thus, adolescent childbearing, which earlier occurred mostly in the context of marriage with an employed husband, is now occurring to unmarried teenagers who, due to their impoverished backgrounds, have few immediate prospects for economic security.

Sexuality Decisions

In addition to such background characteristics and structural issues, individual choices and actions also play a role in adolescent childbearing. Some see the road to parenthood as one which includes numerous decision steps (Hardy & Zabin, 1991). One must have sexual intercourse; use or not use effective contraception; once pregnant, decide whether or not to abort; and, once the child is born, choose to raise the child or to put the child up for adoption (c.f., Morrison, 1985). Changes have occurred in recent decades regarding all four of these decision points.

First, the risk period for young childbearing has increased substantially through both decreasing age at first intercourse and rising age at marriage (Cherlin, 1992). For example, in the late 1950's, 46% of girls were sexually active by age 19. This proportion increased to 53% in the early 1970's, to 66% in the 1980's, and to 76% in 1995 (Abma, Chandra, Mosher, Peterson, & Piccinino, 1997; Ventura et al., 1996). Although adolescents' use of contraceptives, especially condoms, has also increased, this has not been adequate to stem the rate of pregnancy. Data from 1990-95 indicate that 33% of teenagers did not use contraception at first intercourse, and the rates are higher for younger than older teens (Abma et al., 1997). Adolescents also tend to contracept sporadically and ineffectively. However, this is not to imply that teenagers are trying to become pregnant. The disparity between not wanting to become pregnant yet not contracepting effectively has multiple roots, including a lack of knowledge about reproduction and contraception, limited access to family planning and health services, and inadequate ability to foresee and be prepared for protected sexual activity (Morrison, 1985; Robinson, Watkins-Ferrell, Davis-Scott, & Ruchs-Ross, 1993). Many of these factors improve significantly with age. In fact, age is one of the strongest predictors of birth control use (Moore & Peterson, 1989). In addition, adolescents' views of invulnerability and egocentrism, leading to beliefs that pregnancy could never happen to them and thus to ineffective preventive practices, may also play a role, especially for high risk teenagers (Elkind, 1978; Keating, 1990; Quadrel, Fischhoff, & Davis, 1993). Second, teenagers' use of abortion and adoption have decreased in recent years, as have rates of marriage for pregnant teens (Ventura et al., 1996). All of these changes together have resulted in rising rates of unwed adolescent childbirth among low-income teenagers.

Psychological Processes

Although knowledge is growing concerning the demographics of teenage sexuality and childbearing, relatively little research has addressed the psychological factors and processes which predict the occurrence of a teenage birth. Exceptions include work on influences of general social competence on teenage sexuality decisions (Allen, Philliber, Herrling, & Kuperminc, in press), Paikoff's (1995) work on preadolescents' understanding and appraisals of sexual situations, and research on an emotional deprivation model of adolescent pregnancy, asserting that girls who lack adequate emotional support and stability may look to early sex and motherhood to provide emotional closeness (Horwitz et al., 1991b; Musick, 1993). Research on the psychological contributors to teenage sexuality and pregnancy needs to be continued and expanded.

Sexuality Issues Among Boys

Many of the factors which have played a part in increasing births to teenage girls have also affected boys and men. The age of sexual onset has decreased for teenage boys in recent decades, and

the use of contraceptives has risen. For example, the proportion of sexually experienced boys at age 18 rose from 55% in the early 1970's to 64% in the mid 1980's (U.S. Department of Health and Human Services, 1995). At the same time, among urban 17 to 19-year-old boys, the rate of condom use at last intercourse increased from 20% in 1979 to 54% in 1988 (U.S. Department of Health and Human Services, 1995). However, many aspects of boys' roles in teenage births are not well understood. For example, the role of male partners in making abortion and adoption decisions has received negligible research attention. A number of structural arguments, such as the loss of stable blue-collar jobs in urban areas, have been posed as explanations for the decreasing rates of marriage and financial responsibility of boys and young men for the girls they impregnate and the babies they father (e.g., Wilson, 1987; 1996). In contrast, the psychological processes behind these choices have not been adequately explored (see below). Finally, a newly discovered trend raises disturbing questions concerning the male role in teenage pregnancy. Recent studies report that a large proportion of teenage mothers have experienced sexual abuse and forced sexual intercourse prior to their early initiation of sex and teenage pregnancy (Boyner & Fine, 1992; Butler & Burton, 1990; Moore et al., 1995). Further research is needed to explore this issue in representative samples and with nonparenting adolescent comparison groups.

Consequences of Parenthood for Teenage Mothers

Girls who give birth during their adolescent years tend to function less effectively in numerous realms than their peers who delay childbearing. Recent research indicates that many of the negative outcomes of adolescent motherhood, such as low educational achievement and poverty, precede rather than stem from early parenthood. Nevertheless, teenage childbearing also adds to the limited prospects of already disadvantaged adolescents. These outcomes include poorer psychological functioning, lower rates of school completion, lower levels of marital stability and additional nonmarital births, less stable employment, greater welfare use, and higher rates of poverty, and slightly greater rates of health problems for both mother and child as compared to peers who postpone childbearing (Chase-Lansdale & Brooks-Gunn, 1994; Hayes, 1987). Each of these areas will be addressed in turn.

Psychological Processes

A number of psychological tasks of adolescence may be impeded by early parenthood. During the adolescent years, teenagers face the challenges of solidifying their sense of identity (Hauser & Bowlds, 1990; Hauser, 1991) and developing autonomy and independence from parents (Chase-Lansdale, Wakschlag, & Brooks-Gunn, 1995; Feldman & Elliott, 1990; Wakschlag, Chase-Lansdale, & Brooks-Gunn, 1996). Parenthood, with its continual demands and responsibilities, can leave little time for exploration and appropriate individuation in areas of normative teen concern such as peer relations, dating, schooling, and career choices. Young mothers may react to such conflicting demands with psychological distress, perhaps expressed through depressive symptomatology (Carter, Osofsky & Hann, 1991; Wasserman, Brunelli, & Rauh, 1990). Overall, relatively little recent research has addressed the psychological effects of unplanned early parenthood or the processes that allow some girls to overcome the disruptive experiences of this situation.

Educational Attainment

Until recently, most studies on adolescent mothers concluded that early parenthood had a strong

negative effect on the educational attainment of girls, such that young mothers were unlikely to continue their education beyond birth and thus obtained lower total levels of education than their peers who delayed childbirth (e.g., Moore & Waite, 1977). However, recent studies find that this gap is narrowing, due in part to increasing general equivalency degree (GED) programs, schooling requirements for welfare receipt, and more progressive school policies on accepting pregnant students. In addition, new methodologies have revealed that much of the difference in educational attainment seen between adolescent and older mothers may be due not to teenage motherhood itself, but rather to preexisting differences between the groups (Hoffman, Foster, & Furstenberg, 1993; Hotz, McElroy, & Sanders, 1997; Moore et al., 1993).

Several innovative methodological techniques have been developed to attempt to separate out the effects of background factors which influence both the probability of a teenage birth and the future functioning of the young mother from the effects early childbearing. For example, a number of studies have compared sets of sisters, one of whom had a child as a teenager and one of whom delayed childbearing until adulthood, in order to control for differences in family background factors commonly found between teenagers who do and do not become young parents. Fixed effects regression techniques, which control for unmeasured differences between families, are also employed (Geronimus & Korenman, 1992; Hoffman, et al., 1993). Such studies find that the effects of teenage childbearing on high school completion and total educational attainment are much smaller than previous studies had indicated, but are still significant. For example, Hoffman and colleagues (1993) found that postponing a teenage birth to after the age of 20 would increase total educational attainment by .38 years.

These studies have been criticized for their failure to control for unmeasured differences between sisters that may affect both the decision to become a young mother and other functioning outcomes (influences such as motivation, academic ability, etc.; Klepinger, Lundberg, & Plotnick, 1995). To attend to such concerns, one recent study compared two groups of pregnant teenage girls: one group gave birth as teenagers, and the second group became pregnant but miscarried. Such a comparison, the authors claim, controls for many unmeasured individual factors which might influence the behaviors and decisions leading up to an adolescent pregnancy (Hotz, et al., 1997). This study found that having a child before the age of 18 significantly reduces the likelihood of graduation from high school, but increases the likelihood of obtaining a GED, with both birth and miscarriage groups showing a high school completion (diploma or GED) rate of slightly over 50%. However, since a GED may carry a lower return in future earnings than a high school diploma (Cameron & Heckman, 1993), these differences remain disturbing.

The effects of teenage childbearing on educational attainment are also moderated by other factors, such as birth spacing or the decision to drop out of school. For example, if teenage mothers stay in school, they are almost as likely to graduate from high school (73%) as their non-parent peers (77%). In contrast, high school drop out is a strong risk factor for pregnancy, and of adolescents who drop out of school either before or shortly after a birth, only 30% will return and eventually graduate, about half the rate of non-mother drop-outs. (Upchurch & McCarthy, 1990).

Marital Patterns

In addition to effects on educational attainment, teenage childbearing is also linked to different marital patterns. Although teenage mothers have higher rates of early marriage than later childbearers, their marriage rates drop off quickly in their 20's and 30's to rates lower than those of the non-teenage

mother population. Young mothers are also more likely to divorce; thus teenage mothers overall spend more of their parenting years as single mothers than women who delay their childbearing (Bennet, Bloom, & Miller, 1995; Furstenberg, Brooks-Gunn, & Morgan, 1987; Hayes, 1987; Hotz et al., 1997; Moore et al., 1993; U. S. Department of Health and Human Services, 1995). Teenage mothers also have slightly more children than girls who postpone parenthood, often in quick succession (Hotz et al., 1997; Moore et al., 1993). The psychological processes behind these marital and family formation choices are not well understood. It is possible that girls who do not expect to marry choose instead to have an unwed birth, but research to date indicates that this relationship likely functions in the other direction, that is that early unwed births lead to a lower likelihood of marriage (Bennet et al., 1995). Whether this is due to lowered incentives to marry for young mothers, less opportunity, or other reasons, is still being debated (Bennett et al., 1995; Wilson, 1987; 1996).

Economic Outcomes

In large part because of low educational attainment and low marital stability, coupled with the poverty endemic to young parenthood, teenage mothers have lower incomes as adults and are more likely to be on welfare than their peers who delay childbirth (Moore, et al., 1993). For example, the Hoffman study comparing sets of sisters found that a teenage birth nearly doubles the likelihood that a woman will be poor at ages 21-33, increasing the rate of poverty from 16% to 28% (Hoffman et al., 1993). Other studies have questioned whether these differences are attributable to the early birth itself or solely to preexisting factors. The Hotz study comparing teenage mothers to those who had miscarried during their adolescent years found that teenage mothers actually had slightly greater earnings than their peers and similar rates of welfare receipt during their 20's (Hotz et al., 1997). Although teenage mothers' use of welfare is higher and their incomes lower in the years immediately after birth, they make up for this by increased employment and earnings in their late 20's and beyond, when their children reach school-age and employment tends to be more lucrative (Furstenberg et al., 1987; Hotz et al., 1997). The work of Hotz and his colleagues has been criticized on numerous methodological and theoretical fronts, including, for example, assertions that since not all miscarriages are random (e.g., some are caused by smoking or drinking during pregnancy), and since some girls who miscarried would have had an abortion, miscarriages are not true exogenous occurrences. However, further analytic work by the authors reinforce the validity of their results claiming that for non African American women, teenage childbearing actually increases the labor market earnings and hours worked compared to what they would have been had women delayed childbearing (Hotz, Mullin, & Sanders, in press). Whether these differences will continue over the long term is not yet known.

Health Outcomes

Adolescent mothers experience more pregnancy and delivery problems and have less healthy babies overall than do older mothers, but these differences are becoming less notable in recent research. First, the absolute size of these differences seems to be decreasing in recent studies, perhaps due to increased health services for young mothers. Second, new work indicates that deleterious health outcomes are related more to the poverty and lack of prenatal care common to teenage pregnant girls than to age *per se* (an exception seems to be for girls under the age of 15; see Klerman, 1993, and Scholl, Hediger, & Belsky, 1994, for reviews and meta-analysis). Moreover, the frequency of negative maternal health outcomes are greatly reduced for teenagers who receive comprehensive prenatal care

(Klerman, 1993).

Racial Differences

Much of the research on adolescent mothers also considers whether teenage parent outcomes differ by race and ethnicity. In general, the negative effects of teenage childbearing on later income and poverty rates are less severe for African Americans than for whites and Hispanics. It has been proposed that this difference is due to the high rates of single parenthood and poverty among all African American families, such that families headed by teenage mothers are not that different from older-mother African American families (Astone, 1993; Moore et al., 1993). In addition, white young mothers are most likely to marry, followed by Hispanics and African Americans (U.S. Department of Health and Human Services, 1995), while African American teenage mothers are more likely than whites or Hispanics to stay in their family home, continue in school, and delay marriage, practices which likely serve to increase their access to family help with childrearing and financial support (Rosenheim & Testa, 1992). Finally, Geronimus (1987) has proposed that early childbearing may be an adaptive practice for African Americans, especially in relation to their physical health. Termed the "weathering hypothesis," this argument claims that because African Americans tend to experience high rates of health problems in their late 20's and beyond such as elevated blood pressure and diabetes, and because they are more likely to receive aid from both their families and the government during their teen years than when they are adults, early childbearing is a logical and adaptive practice for this group (Geronimus, 1987; 1992). The weathering hypothesis remains a controversial one, in need of further research.

Individual Differences

Finally, longitudinal research on adolescent mothers points to the importance of considering individual differences and diversity in the long-term outcomes of teenage mothers and their children. For example, in the Baltimore Study, a longitudinal study of over 300 low-income black mothers who were pregnant as teenagers in the late 1960's, a 17 year follow-up showed much more promising functioning than short term studies had predicted (Furstenberg et al., 1987). Over one third of the women had received some education past high school, and almost three quarters were employed. About 25% had achieved middle-class standing by means of marriage, employment, or a combination. However, the women's marriages had high rates of dissolution, and their children appeared to be faring less well than their counterparts with older mothers. Similarly, a 20 year follow-up of adolescent mothers enrolled in the Young Mother Program in the late 1960's indicated that 62% of the sample had achieved "long term success," defined by the authors as economic self sufficiency and completion of a high school degree (Horwitz, Klerman, Kuo, & Jekel, 1991a). However, mothers also experienced low life satisfaction, and a preponderance of stressful life events.

What caused these different trajectories? Being at grade level when one became pregnant, coming from a smaller family of origin not on public assistance, and having high expectations from both one's family and oneself, were all predictors of long term success for these young mothers (Furstenberg et al., 1987; Horwitz et al, 1991a). However, it is important to note that although the economic and educational outcomes of these young mothers were somewhat better than expected, their psychological and family functioning appear more bleak over the long run. Further research needs to more clearly address such differences and how they interact.

Summary

In sum, study of the effects of teenage childbearing on maternal functioning continues to receive a large amount of increasingly sophisticated research attention. New methodologies including innovative comparison groups and statistical techniques are providing more precise estimates of the impact of young childbearing, controlling for many of the selection factors that both lead to teenage pregnancy in the first place and continue to exert effects on young mothers and children. This work needs to continue with current cohorts of young people. Much of the work discussed above involves women who gave birth as adolescents in the 1960's and 70's. Whether such findings will hold for current cohorts of teenagers remains to be seen.

A second challenge to research on teenage motherhood must be highlighted. The study of life trajectories of adolescent mothers has been the province of economics, sociology, and demography. Yet, psychological theory and methods are essential for understanding key developmental processes associated with the causes and consequences of adolescent childbearing. For example, developmental transformations which occur during adolescence such as individuation and identity formation, and the ability to form mature, intimate relationships (Feldman & Elliott, 1990), may all be affected by early parenthood (Brooks-Gunn & Chase-Lansdale, 1995). However, this developmental knowledge has rarely been applied to the study of teenage pregnancy, in large part because longitudinal, national data sets tend to focus on demographic components such as educational and employment outcomes and to neglect psychological functioning. Virtually no longitudinal and prospective studies have examined whether psychological factors such as self esteem, individuation, or depression influence and are influenced by sexual activity and early childbearing, a notable omission in the literature. Although new research indicates that effects of early childbearing on economic outcomes are not as negative as previously thought once predisposing characteristics and poverty are accounted for, the same may not be true for psychological and family functioning.

Parenting Practices and Consequences of Teenage Childbearing for Children

New research has made substantial gains in its consideration of the effects of early childbearing on the functioning and well-being of young mothers. However, the same level of attention has not been directed towards the study of the children of teen mothers. Although many longitudinal, national studies contain basic child functioning measures, the innovative comparison group and statistical techniques discussed above have not been used to assess effects of teenage childbearing on child development or on maternal parenting practices.

Parenting Practices

The transition to parenting can be a stressful time for all parents, regardless of age and background (Cowan & Cowan, 1992). For teen mothers, this stress may be compounded both by their typically underprivileged and impoverished backgrounds as well as by the addition of other normative changes which occur during adolescence such as identity formation and the renegotiation of relationships with one's family of origin (Chase-Lansdale & Brooks-Gunn, 1994; Feldman & Elliott, 1990). In addition, young mothers rarely marry and tend to have additional children in quick succession; these factors increase the already substantial difficulties such mothers may have balancing childcare, educational, and work responsibilities. Thus it seems reasonable to predict that adolescents will have more difficulty with parenting than older mothers.

Teenage mothers have been found to be just as warm, but less verbal, and less sensitive and

responsive to their infants than older mothers, (Culp, Appelbaum, Osofsky, & Levy, 1988), factors which may be related to their greater levels of depressive symptomatology in the year following the birth (Wasserman et al., 1990). Young mothers also tend to provide a less stimulating home environment (Luster & Dubow, 1990; Moore, Morrison, & Greene, 1997), to perceive their infants as being more difficult, and to have unrealistic expectations (see Brooks-Gunn & Furstenberg, 1986 and Brooks-Gunn & Chase-Lansdale, 1995 for reviews). However, it is important to consider the methodologies of these studies and the comparison groups they employ. For example, many studies compare the parenting practices of teenage mothers with those of significantly older, middle-class mothers who may not construe a reasonable comparison group. Relatedly, many of these studies do not adequately take into account background and socioeconomic differences between older and younger mothers, and when these factors are controlled, the strength of the differences diminish significantly, although they do not disappear altogether (see Klerman, 1993). Similarly, in studies which use more similar comparison groups, such as mothers in their early 20's who also live in poverty, few differences are found in parenting styles (Benasich & Brooks-Gunn, 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Wakschlag et al., 1996).

On the other hand, the vast majority of research on the parenting practices of adolescent mothers only studies the first year or two of parenting. Whether teens' parenting behaviors change over time relative to older mothers is unknown. Considering the findings (see below) that child functioning appears to worsen over time in children of adolescent mothers, the hypothesis remains that adolescent mothers' parenting may decrease in quality or effectiveness as their children grow into adolescents. Overall, more research is needed which considers the psychological and family processes that are responsible for the patterns of parenting over time found in teenage mothers, with more closely matched comparison groups, and with designs that include more extensive and sophisticated measures than are typically found in large data sets.

It is also important to ring a more general cautionary note concerning measurement in studies of teenage parents. Many studies of adolescent mothers involve samples of low-income, mostly minority families (Brooks-Gunn & Furstenberg, 1986). The measures used, however, were often developed and normed on middle-class, white, married samples, and thus may not correctly capture the assumed constructs and behaviors (Benasich & Brooks-Gunn, 1996; Brooks-Gunn & Chase-Lansdale, 1995). Hence, more work is needed on the applicability of measures for different samples of mothers and children.

Child Functioning

Numerous small-scale studies have examined the cognitive and behavioral functioning of children of teenage mothers, although the majority of these consider only the infancy and preschool periods (see Brooks-Gunn & Furstenberg, 1986, Chase-Lansdale & Brooks-Gunn, 1994, and Chase-Lansdale, Brooks-Gunn, & Paikoff, 1991 for reviews). Few differences have been found in infancy between children of teenagers and children of older mothers. In the preschool years, delays in cognitive development begin to emerge, and continue into the school years (Furstenberg et al., 1987; Moore, 1986; Moore et al., 1997). Preschoolers of teenage mothers also tend to show behavior problems including higher levels of aggression and lower impulse control than their peers born to older mothers. In adolescence, children of teenagers experience higher rates of grade failure, delinquency, incarceration (for boys), and early sexual activity and pregnancy than peers born to older mothers (Furstenberg, et

al., 1987; Furstenberg, Hughes, & Brooks-Gunn, 1992; Grogger, 1997; Haveman, Wolfe, & Peterson, 1997; Horwitz et al., 1991b; Moore et al., 1997).

However, there are a few important caveats to this seemingly bleak picture. One is that children, like their mothers, show diversity in their functioning. For example, although there is a perception that all children of teenage mothers are at high risk of early pregnancy themselves, many adolescents escape this. In the Baltimore Study, one third of the daughters became teenage mothers (Furstenberg et al., 1987), while the follow up of the Young Mothers Program showed that one quarter of the daughters and 11% of the sons of participants became teen parents (Horwitz et al., 1991b). In addition, as for teenage mothers themselves, socioeconomic status and poverty appear to be more important predictors of children's and adolescents' functioning than is mother's age at birth (Brooks-Gunn & Furstenberg, 1986).

In contrast to research on educational and behavioral outcomes of children born to teenage mothers, little research has considered their psychological functioning. In infancy, babies born to teenage girls appear no more likely to experience attachment problems than children of comparable high risk older mothers (Benn & Saltz, 1989; Hann, Osofsky, Stringer, & Carter, 1988; Spieker & Bensley, 1994). However, children of teenage mothers are more likely to be recipients of reported child abuse and neglect and more likely to be placed in foster care than children of older mothers. This effect is stronger for later born than for first born children of young mothers (Goerge & Lee, 1997). More research is needed on the socioemotional development of children of teenage mothers during their preschool and childhood years.

A plethora of questions remain concerning the effects of early parenthood on the children of teenage mothers. (1) Why do problems in cognitive and behavioral functioning seem to increase with the age of the child? Hypothesized explanations include the effects of accumulated stress, increasing demands of parenting older children and adolescents, cumulative effects of long-term poverty, changes in living arrangements, or the transition to school. (2) What about the later born children of teen mothers; do they fare better than first borns, due to more experienced mothering, or do they fare worse, perhaps because of lower social support and cumulative stress? (3) What parenting and contextual factors are responsible for these patterns of child functioning? Numerous factors could play a role: if adolescent mothers work more than their older counterparts in the early years of their children's lives, as Hotz et al. (1997) suggest, mothers may have less time to spend with their children and thus provide less warmth, stimulation, and supervision; the low marriage rates and high marital instability in teenage mother families likely lead to lower paternal involvement in children's lives; early motherhood may bring with it special psychological stresses whose effects and processes are yet to be delineated. Overall, it seems that today's children of teenage mothers, faced with differing educational and employment demands of a changing global market, may in fact fare worse than longitudinal studies of previous cohorts of young mothers might imply.

Finally, methodological considerations of research on children of adolescent mothers deserve attention. Like earlier studies of teenage mothers themselves, many of the studies of child outcomes suffer from serious methodological difficulties and lack adequate controls for background factors. In light of how much of the problematic long-term outcomes of teenage mothers have been attributed to preexisting background characteristics and not to early childbearing *per se*, research on child functioning in young mother families deserves the same careful attention. In particular, it is important to distinguish effects of poverty from effects of mothers' age at birth on child development. For example, a large

research base details the negative impacts of poverty on family and child functioning, impacts such as harsh parenting and parental depression, and for children, school failure, early sexuality, and delinquency (Duncan, & Brooks-Gunn, 1997; Duncan, Brooks-Gunn, & Klebanov, 1994; McLoyd, 1990). As these outcomes are strikingly similar to the outcomes of teenage parenthood described above, it seems plausible that poverty may account for much of the impact on children previously ascribed to teenage childbearing, but firm conclusions along these lines cannot be made. A stronger focus on individual differences, especially concerning coping and adaptation, is needed.

Involvement and Impact of Fathers

Who are Teenage Fathers?

Overall, detailed and thorough information on fathers of children born to teenage mothers is rare. Most data sets gather information from the mother only, and in many cases do not include even basic demographic information on the father. From the information that is available, it is generally agreed that fathers tend to be 2 to 3 years older on average than teenage mothers, a fact which has caused concern among some researchers and policy makers (Coley & Chase-Lansdale, under review; Landry & Forrest, 1995; Robinson, 1988). However it is instructive to note that in our society, older male partners are normative: partners of mothers in their 20's and 30's at birth also average 3 years older than mothers (Lindberg, Sonenstein, Ku, & Martinez, 1997). Like teenage mothers, the boys and men who father their children tend to be poor, are often continuing an intergenerational practice (many are from families who experienced teenage childbearing and welfare receipt), live in low-income communities, and have low educational achievement (Lerman, 1993). In addition, like early motherhood, early fatherhood appears to have negative consequences on future functioning, although this issue needs more attention. Boys who father a child during adolescence appear to work more hours and earn more money than their non-parent peers in first years following the birth, but perhaps due to this commitment, they obtain less education, and thus have lower long-term labor market activity and earnings than their counterparts who delay parenthood (Brien & Willis, 1997; Marsiglio, 1986).

Financial Contributions

Due to their own typically impoverished backgrounds, young fathers are rarely strong sources of financial support for teen mothers and their children. Although most start out with a desire to provide for their children, their child support contributions are extremely low. Historically, this has been exacerbated by the low rates of paternity establishment and legal child support arrangements made by mothers. However, both of these are now increasing substantially due to the Family Support Act of 1988 (Chase-Lansdale & Vinovskis, 1995) and further increases are expected in reaction to the 1996 welfare reform legislation (see below). In addition, smaller and more qualitative studies of young fathers find substantially higher levels of financial contributions than formal census figures show, perhaps due to the prevalence of unreported, irregular, and in-kind contributions (Coley & Chase-Lansdale, under review). Finally, it is important to keep in mind that the financial status of young fathers tends to improve over time, and thus enforcement of child support payments could, in the long run, make a relatively large contribution to the care of children born to teenage mothers (Chase-Lansdale & Vinovskis, 1993).

Father Involvement

The amount of contact that young fathers have with their children is also quite variable. Somewhat surprisingly, given the low rates of marriage and high incidence of divorce among teenage mothers and their partners, 50% of teenage fathers live with their children sometime after birth, though this situation often does not last long (Marsiglio, 1987). Rates vary greatly by race: white fathers have the highest rates of cohabitation, followed by Hispanics and then African Americans. Many young fathers see their children regularly, at least for the first few years. In a nationally representative sample, Lerman found that almost half of new young fathers visited their child weekly, and almost 25% had daily contact (Lerman, 1993). Smaller studies find similar results (e.g., Coley & Chase-Lansdale, under review). However, these rates decrease over time, such that fewer than a quarter of fathers see their school-age children weekly (Lerman, 1993).

What predicts father involvement? African American fathers have very low rates of marriage and cohabitation, but they tend to remain more involved with their children over time than do white or Hispanic men (Lerman, 1993; Marsiglio, 1987). An unstable or hostile mother-father bond seems to interfere with unmarried fathers' positive involvement with their children, whereas positive intra-familial relationships appear to support greater father involvement (Coley & Chase-Lansdale, under review; Furstenberg, 1995; Furstenberg & Harris, 1993). Mother-father relations also mediate the relationship between father-child contact and child functioning (Amato & Rezac, 1994). Although most research on young fathers, like work with broader samples of unmarried men, tend to focus on simplistic measures of father involvement such as visitation frequency and child support, new research is beginning to address more qualitative and psychological aspects of fathering and more expansive measures incorporating such constructs as paternal responsibility, types of and frequency of interactions, and emotional relationships between father and child (Coley, in press; Coley & Chase-Lansdale, under review). Intervention programs are also starting to address whether steps can be taken to increase the involvement of young fathers with their children.

Effects of Young Fathers on Children

While many questions remain unanswered concerning the quality and extent of father-child bonds in families of young mothers, even more remains unknown about how such relations affect children. In a twenty year follow-up of children of the Baltimore Study teenage mothers, Furstenberg found that for adolescents who lived with their biological father or a stepfather, those with strong attachments showed better educational, behavioral and emotional functioning than adolescents with a weak paternal bond. On the other hand, having a highly involved father early on who then decreased his involvement, or having a poor relationship with a father, were both more detrimental than having no relationship at all (Furstenberg & Harris, 1993). A myriad of questions remain concerning young fathers and their children, including how fathers' availability, involvement, and interactions with their children affect child development.

Psychological Functioning

The psychological functioning of young fathers is another area which has been almost completely ignored in research. Little is known about the psychological predictors of adolescent fatherhood, except that adolescent fathers tend to be more accepting of teenage pregnancy and of abortion than nonfathers (Robinson, 1988). The impact of young fatherhood on the fathers themselves has also

received scant attention, though teenage fathers, like teenage mothers, seem to have unrealistic expectations and difficulties adjusting to teenage parenthood (Robinson, 1988). The effects of early fatherhood on boys' emotional functioning is clearly deserving of further attention, especially as new welfare and child support laws are likely to increase fathers' active participation and roles in parenthood.

Involvement and Impact of Grandmothers

Effects of Grandmother Involvement on Young Mothers

Research on adolescent parenthood is moving from a field where teenage mothers and their children were studied relatively context-free, to one in which context, including family, race, socioeconomic status, and neighborhood are often taken into account and directly addressed. One particular area in which this change is obvious is that of three-generational family systems. A number of recent research studies have carefully considered the roles that grandmothers[3] play in coparenting, housing, and supporting young mothers and children, and how these activities in turn affect family functioning (East & Felice, 1996; Spieker & Bensley, 1994; Unger & Cooley, 1992). For example, through extensive observational and interview information from three-generational families, Wakschlag and colleagues determined young mothers' individuation, that is autonomy from and communication with grandmothers, to be the most important aspect of mother-grandmother relations in predicting positive parenting practices, especially for noncoresiding adolescent mothers (Wakschlag et al., 1996). Relatedly, Apfel and Seitz (1991) determined a pattern of shared childrearing in which grandmothers aided their daughters and modeled appropriate parenting behaviors (but neither disengaged nor took total control of parenting responsibilities) was most appropriate for providing young mothers with both the support and autonomy they needed to effectively assume healthy primary parental responsibility.

In addition, recent studies on the effects of coresidence have provided somewhat surprising findings. Although earlier research indicated that coresidence was protective for teenage mothers and their children, at least during the early years of the child's life (Furstenberg et al., 1987; Horwitz et al., 1991b), newer studies disagree. In research with three-generational African American families with 3-year-old children, Chase-Lansdale and colleagues (1994) found that both mother and grandmother parenting practices were of lower quality (less supportive and authoritative, more negative and disengaged) when young mothers coresided with grandmothers. In families where mothers were in their early teens at birth, however, coresidence predicted warmer and more positive parenting by grandmothers. Similarly, East and Felice (1996) found that coresidence among adolescent mothers and grandmothers was linked with higher mother-grandmother conflict and with poorer child functioning. From this still sparse research base, it appears that teenage mothers, at least older teenagers, may provide the most effective parenting and their children function best when they live apart from the grandmother but receive high levels of grandmother support or childcare (East & Felice, 1996; Spieker & Bensley, 1994). These findings present important implications for new welfare policies which require teenage mothers to reside at home in order to receive welfare benefits. The implications of forced coresidence should be a top priority for research (Gordon, Chase-Lansdale, Matjasko, & Brooks-Gunn, in press).

Effects on Grandmothers

Teenage parenthood can also affect the grandmother directly. Early entry into

grandmotherhood and coresidence with a grandchild can create difficulties for grandmothers, who often provide scarce monetary resources, time, and emotional support to daughters and grandchildren, thus leaving little time and energy for their own challenges and tasks (Burton, 1990; Burton, & Bengtson, 1985). More work is needed to understand the effects of these experiences on grandmothers (who are often just recovering from early parenthood themselves; Chase-Lansdale et al., 1991) and to address long-term functioning and life course pathways of young grandmothers.

Intervention Programs

As public and political attention have become increasingly focused on teenage childbearing, efforts to prevent the occurrence of teenage pregnancy and to ameliorate its consequences have proliferated. Several detailed reviews are available on teenage pregnancy prevention and intervention programs (e.g., Frost & Forrest, 1995; Kirby, 1994; Maynard, 1995; Miller, Card, Paikoff, & Peterson, 1992; Miller & Paikoff, 1992); here we will cover only the most significant new programs and issues and then turn to policy considerations.

Sexuality and Pregnancy Reduction Programs

Programs aimed at delaying or reducing sexual activity have taken a number of tacks: providing knowledge of sexual reproduction and access to contraceptives; reinforcing values and teaching abstinence; building decision-making and social skills; and increasing other life options (Maynard, 1995; Miller et al., 1992). Programs most successful in delaying sexual activity and increasing contraceptive use among adolescents generally contain a two-pronged approach of (1) teaching that abstinence is best for preteens and young adolescents, and (2) providing information and access to contraceptives for older teens (Frost, & Forrest, 1995). Other key program elements include developing clear and specific program goals, targeting services appropriately by developmental and experience level, and providing comprehensive services with a variety of components (see Frost, & Forrest, 1995; Kirby, 1994; Maynard, 1995; Miller et al., 1992; Miller & Paikoff, 1992).

Among high-risk teenagers, comprehensive health-oriented services seem to be the most promising avenue for decreasing the rate of pregnancy. For example, one of the most successful programs to date, the Johns Hopkins Pregnancy Prevention Program, incorporated comprehensive medical care and contraceptive services, social services, and parenting education in a school-linked, coordinated system. This program postponed the age of sexual onset, increased contraception use, reduced the frequency of sex, and, most strikingly, reduced the pregnancy rate by 30% while comparison school rates rose by 58% (Hardy & Zabin, 1991).

Another success is the Teen Outreach Program, which focuses on enhancing social development among adolescents through structured volunteer community service combined with classroom discussions on future life choices, careers, and relationships (see Allen et al., in press). This program is based on a developmentally-oriented approach that addresses the broader psychological processes underlying all adolescent problem behaviors (of which early sexuality and pregnancy are just two examples), with the expectation that improved social competence and connections to adults will lead to enhanced psychological functioning and decreased problem behaviors (Donovan, Jessor, & Costa, 1988). A national evaluation found significantly lower rates of sexual intercourse (as well as school suspension and course failure) among program adolescents compared to controls (Allen et al., in press). While the success of the Teen Outreach Program illustrates the importance of psychological

processes, more work is needed to see if the program is equally effective in persistently poor neighborhoods and if program effects endure over time.

Thus, a few recent interventions have shown significant progress in efforts to delay sexuality initiation, increase contraceptive use, and decrease pregnancy among adolescents. However, a great many programs are unsuccessful, and there are numerous avenues for improvement. For example, many school-based programs deal only with abstinence and are not allowed to discuss contraceptive choices, a narrow focus which has been shown to have little measurable effect on reducing teenage sexual activity or pregnancy for most groups of adolescents (Kirby, 1994). Nevertheless, in 1996 the U.S. Congress allocated $250 million to fund abstinence-only programs over the next five years (Illinois Caucus for Adolescent Health, 1997). Clearly, a greater commitment is needed to funding scientifically rigorous evaluations of programs and replications of those which are most successful.

Programs for Parenting Teenagers

Intervention programs which target parenting teenagers in an effort to build their human and social capital and improve their goals and life chances have also had predominately disappointing results. Many of these programs specifically target teenage parents on welfare and/or those who have dropped out of school, and often include an impressive array of services such as education and job training, free child care and transportation, and other support services. A number of programs have increased participants' educational attainment, but most of this increase has been in achievement of a GED, rather than high school completion or college education. In addition, few programs have increased teenage mothers' rates of employment or earnings or decreased their use of welfare, and some have experienced increases in repeat pregnancies and births (see Maynard, 1995 for a review). However, results may improve in future years, as the effects of the interventions have time to mature.

Why are the results of these interventions so disappointing? First, the young mothers whom these programs serve are often multiply disadvantaged. In addition to being young parents and living in poverty, these teenagers often lack basic educational skills. For example, the Teenage Parent Welfare Demonstration found that one third of their adolescents had reading skills below the 6th grade level (Maynard, 1995; Quint, Polit, Bos, & Cave, 1994). Such low basic academic skills often prohibit the girls from accessing job training and further educational services. Participants with higher education or skills at entry generally benefit more from such programs (Warrick, Christianson, Walruff, & Cook, 1993). Second, while programs attempt to coordinate a multitude of services, the services themselves are often of low quality or have requirements, such as minimum educational standards, which the teenagers do not meet.

A striking and disturbing commonality in almost all of these programs and interventions is their inattention to the children of teenage mothers. Although most programs presumably believe that by aiding the prospects of teenage mothers, they will in turn aid the outcomes of their children, very few programs or evaluations address this directly, either through services specifically for children or evaluations of program effects on children (New Chance is an exception; Polit, 1989; Quint, Musick, & Ladner, 1994). Thus, there is very little information about whether intervention programs, especially welfare reform programs (which often include sanctions on welfare grants which could seriously limit children's access to adequate food, shelter, and clothing; Long, Gueron, Wood, Fisher, & Fellerath, 1996; Maynard, 1995), might negatively or positively impact children's development, an urgent question in this era of policy changes.

Summary

Numerous lessons can be derived from the plethora of intervention programs assessed to date. One is the need to direct programs to the developmental needs of the participants, and to intervene at multiple time points. For example, programs which promote abstinence have the best response with youth who are virgins at the start of the program, whereas contraceptive information is most useful for teenagers who are beginning or at least thinking about sexual activity. Two, stronger links between services for mothers and children are needed (Chase-Lansdale et al., 1991; Smith, 1995). Three, programs for children of adolescent mothers should go beyond infancy and the preschool years. Although existing research indicates more negative outcomes for older versus younger children of teenage mothers, this finding is not reflected in child oriented services. Four, programmatic perspectives do not take a family systems approach. For example, very few services include fathers or other family members nor target grandmothers or other primary caregivers directly.

Policy Implications: A Focus on Welfare Reform

The most relevant and compelling current policy issue related to teenage pregnancy is welfare reform. The passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRAWORA) is an extraordinary event in our nation's social policy toward impoverished children and their families, especially adolescent mothers and their offspring. This unprecedented antipoverty legislation stems in part from long-standing concern on the part of the public and policymakers that our former welfare system caused families to rely on government cash aid rather than seek employment and become financially self-sufficient. However, it was the intersection of this concern regarding welfare dependency with reactions to high rates of nonmarital and adolescent childbearing that truly galvanized support for the 1996 legislation.

Given these concerns, the new welfare legislation was designed specifically to address adolescent and out-of-wedlock pregnancy and births. As the majority of teenage mothers use welfare at some point during the early years of their children's lives, and often use it as their major source of support for long periods, these changes are likely to have far-reaching effects in this population. The main provisions of the bill which are likely to have a large impact on young mothers are the following: (1) entitlement to cash welfare benefits is abolished; (2) families can receive benefits for no longer than 5 years over their lifetimes (shorter at state discretion; longer if states use their own funds); (3) recipients are required to work from 20 to 30 hours per week after two years of TANF receipt; (4) minor mothers are required to live with a parent or legal guardian and to stay in school; and (5) mothers are required to identify the father and cooperate with child support enforcement. States may also impose a family cap, that is give no additional money for children born while the mother is on welfare (Leven-Epstein, 1996; U.S. House of Representatives, 1996).

Each of these provisions is likely to affect young mothers. First, as many teenage mothers receive welfare for 10 years or more (Bane & Ellwood, 1986), time limits present a major challenge, and an economic recession may lead states to close down eligibility for new recipients of public aid. The positive argument behind welfare reform for adolescent mothers is largely an economic one: with a time-limited opportunity to raise children at home with government support, adolescent girls will no longer have monetary incentives for pregnancy and disincentives for employment or marriage. Similarly, school and work requirements may provide a necessary incentive to aid some young mothers in finishing

their education and obtaining employment, possibly leading to improved self esteem and better psychological functioning, and thus the ability to provide better parenting to their children. Opponents of welfare reform argue that mothers who enter the work force or stay in school may have difficulty locating quality child care, and may experience added stress from increased time demands. For other mothers who are unable to acquire a stable job, their families thus could slide deeper into poverty, possibly inducing homelessness or increases in child abuse and neglect.

The implications of the new coresidency requirement were discussed above. It is possible that forced coresidency may increase tensions between some mothers and grandmothers and lead to poorer parenting, especially for older teenagers. Finally, the provisions concerning fathers will increase the number of legally recognized father-child relationships and possibly increase fathers' monetary contributions to their children, and may also improve the amount of interaction and the emotional bond between father and child. However, for some women and children, fathers may be a destructive presence. It is also possible that these increased paternal demands may actually decrease fathers' contributions and presence by interfering with private parental agreements.

The intense focus on teenage mothers and out-of-wedlock births in the new legislation is evidenced by several other provisions. Up to 5 states per year will each receive a $20 million "bonus" if they show a decline in both "illegitimacy" as well as abortion rates (U.S. House of Representatives, 1996, p. 15). As mentioned previously, substantial funds have been set aside for new abstinence education programs for adolescents. However, no TANF funds are targeted for family planning or other types of programs to prevent teenage pregnancy (Leven-Epstein, 1996).

Overall, the new policies are likely to produce significant changes in the lives of many teenage mothers and their children. The direction and meaning of these changes are unknown at this time, as the new programs are just beginning to be implemented. It is likely that effects will not be simple and unidirectional, but rather that subsets of mothers will react in different ways. For example, for young mothers with a high school degree and work experience, the benefit changes and time limits may provide the needed incentive to obtain and maintain stable employment. Mothers with low education skills and poor functioning, or with other family problems such as a disabled child, may have great difficulty maintaining stable employment, and thus may suffer a substantial loss in income, as the research to date has suggested (Long et al., 1996; Maynard, 1995). Finally, disturbingly little attention has been paid to the possible impacts of welfare reform on the children of adolescent mothers; these effects may be substantial (c.f., Chase-Lansdale & Brooks-Gunn, 1995).

Conclusion

The most striking conclusion to be drawn from this review of basic and applied research, evaluation studies, and program and policy implications concerning teenage pregnancy and parenthood is that a strong psychological perspective is lacking, in particular a perspective that emphasizes development. Psychologists have an extremely important role to play in this broad field. Understanding and documenting normative sexual development and behavior is well underway, but much more extensive psychological research is needed to examine the antecedents, correlates, and consequences of teenage pregnancy and childbearing. Currently, the central discourse addressing the causes and consequences of teenage pregnancy --including widely-accepted ideas for reducing nonmarital births and requiring young mothers to be self-sufficient-- are based on an economic model, namely that the primary reasons adolescent girls become pregnant are financial. To ensure that the crucial psychological

factors surrounding adolescent pregnancy and parenthood are better understood and accorded their proper role, psychologists must forge a stronger presence in research paradigms, methods, interventions, and policy settings.

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Footnotes

[1] Throughout this report, the term white is used to refer to non-Hispanic caucasians, and Hispanics include those of any race.

[2] There is also great variation within Hispanic subgroups. For example, in 1989 22% of all births to Puerto Ricans were to girls under the age of 20, while teen births accounted for 17% of Mexican American births, 8% of Central and South American births in the U.S., and 7% of Cuban American.

[3] In this report, the term "grandmother" is used to refer to the biological mother or mother-figure of the teenage mother.