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Teenage Pregnancy and Mental Health

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Abstract: This article reviews the intersection between adolescent pregnancy and mental health. The research involving mental health risks for adolescent pregnancy and for parents who are teenagers are discussed. Depression and conduct disorder have emerged with the most attention. Research-based treatment of these disorders in adolescents is presented.

Keywords: teen pregnancy; adolescent pregnancy; adolescent mental health; adolescent depression; conduct disorder

1. Introduction

According to the Centers for Disease Control, in 2014, the birth rate for adolescent females (ages 15–19) reached a historic low at a rate of 24.2 per 1000 [1]. However, this still accounts for almost 250,000 babies born to this age group. An Urban Institute report summarizing the evidence has found that teen childbearing is associated with long-term poverty, low educational attainment for both mother and children, and risks for children are increased health problems, incarceration, bearing a child as a teenager, and facing unemployment as a young adult [2]. These risks are present even when controlling for poverty, neighborhood effects, and other sociodemographic risks that contribute to teenage pregnancy.

Mental health disorders are fairly common in adolescence with one in four or five teenagers suffering from a disorder, according to the National Comorbidity [3]. Low social economic status is associated with the development of mental disorders in children and adolescents [3]. Those living in poverty are more exposed to stressful circumstances such as crime, violence, availability of drugs, and lack of safe child care, convenient transportation, quality health care, and adequate housing. A review of the literature on neighborhood effects found evidence that living in a disadvantaged neighborhood had negative consequences for children's mental health functioning [4]. Moreover, a large-scale study of 2805 children found that those living in poor neighborhoods were more likely to have mental health problems [5]. Over time, as children mature, the effects become more deleterious. For adolescents, impaired mental health, criminal behavior, early sexual activity, and teenage pregnancy are associated with living in poor neighborhoods [4]. Other adverse childhood events, such as violence, abuse, neglect, parental substance use disorders, mental illness, or criminal behavior, are also associated with both mental health disorders and adolescent pregnancy, as well as other problematic outcomes [6].

The focus of this article is on mental health risks for adolescent pregnancy and mental health issues that may emerge during pregnancy and parenting for teenage mothers. Search terms were the following: PubMed ("pregnancy in adolescence" [MeSH terms] AND "mental health" [MeSH terms]); Academic Search Complete (SU pregnancy in adolescence OR SU teen* pregnancy OR SU teen* motherhood OR SU adolescent motherhood AND SU mental disorder OR SU mental health OR SU mental illness); and PsychInfo ("mental health" OR "mental disorder" OR "mental illness" AND pregnancy in adolescence OR teen* pregnancy OR teenage motherhood or adolescent motherhood).

Before launching into the topic of study, however, a few caveats are in order. First, the emphasis is on mothers since that is where the research has been located. Second, the occurrence of pregnancy

in adolescence and the development of mental health disorders are best described in terms of biopsychosocial phenomenon. To attribute a psychological disorder as the reason for an adolescent pregnancy is simplistic and reductionistic. Third, many of the same social risk factors that contribute to adolescent pregnancy may also contribute to the development of a mental disorder [7]. Fourth, this review concentrates on both the risk of mental disorder for adolescent pregnancy, as well as mental health during adolescent parenting. In the latter, it is recognized that the stress of adjusting to the demands of raising a baby, in addition to navigating the normal developmental tasks of adolescence, may exacerbate or contribute to psychological distress. Therefore, it is difficult to tell whether the stress involved with pregnancy and early childbearing results in poor mental health outcomes or whether these stem from "the adverse life circumstances that often precede and predict teen pregnancy. In other words, the direction of causality in the relationship between teen parenthood and mental health problems is complex and not elucidated by existing research" [6]. Finally, this review will concentrate on specific mental disorders that have been associated in the research with adolescent pregnancy and parenting, which have involved depression and conduct problems.

2. Depression

The depressive disorders that pertain to adolescents are catalogued and described in the Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the American Psychiatric Association (APA). Major depressive disorder is represented by at least a two-week period during which a person experiences a depressed mood or loss of interest in nearly all life activities, with five or more symptom categories being represented. Persistent depressive disorder represents a general personality style featuring ongoing symptoms that are similar to, but less intense than, those of major depression.

While the rate of depression for children is fairly low, the stage of adolescence brings with it a spike in the rate of depression. For adolescents in the general population, lifetime and 12-month prevalence are 11% and 7.5%, respectively [8]. Further, females, beginning at age 13, begin to have a greater risk than males for depression at a 2:1 ratio that then continues throughout the lifespan [9]. While rates vary by study, reviews have indicated that Latino ethnicity is also associated with a greater risk of depression compared to other U.S. ethnic groups [10,11]. Further, rates of suicide attempts among adolescent Latinas are significantly higher than their Caucasian and African-American counterparts [12].

Compared to nonpregnant teens, pregnant teens may have an even greater risk for depression. Figures vary across samples, but rates of 25 [7], 30% [13], band 42% [14] have been reported. Depression may present many serious risks for adolescent pregnancy, birth outcomes, repeat childbearing, and parenting. As mentioned earlier, the occurrence of adolescent pregnancy is multi-factorial, and depression may present one influence that might contribute to early pregnancy in the presence of other risk [15,16] compared pregnant teenagers to pregnant adults. In multivariate analysis, the following factors had a significant independent association with younger age of motherhood in order of magnitude: a history of parental separation/divorce, exposure to family violence in early childhood, illicit drug use, idealization of pregnancy, low family income, a positive score of depression or anxiety on a standardized scale, and a low level of education. In this study, depression was one individual risk factor among several environmental factors.

Pregnancy in late adolescence was studied as an outcome in a prospective study of 992 U.S. young women ages 18 to 20 who wanted to avoid pregnancy [17]. Rates of pregnancy were higher among women with baseline depression (14% versus 9%) and stress (15% versus 9%) compared to women without symptoms. In multivariable models, the risk of pregnancy was 1.6 times higher among women with stress symptoms compared to those without stress. Women with co-occurring stress and depression symptoms had over twice the risk of pregnancy compared to those without symptoms. Depression and stress, which often co-occur, appear to put young women at risk for an unintended pregnancy.

Longitudinal data (the National Longitudinal Survey of Adolescent Health (N = 14,271) were used to examine the relationship between depressive symptoms among females and males in adolescence and unintended first birth in emerging adulthood [18]. Respondents who reported higher levels of depressive symptoms in adolescence were more likely to report an unintended birth compared with respondents who did not have children. Although these births did not occur in adolescence per se, the results still point to the role of depression in early and unplanned pregnancy.

After a pregnancy has occurred, birth outcomes may also be affected by depression. A medical record study of 294 African-American and Latina adolescents found that serious depression in the way of suicidal ideation specifically was associated with lower birth weight, compared to teens reporting no symptoms of depression and those reporting depression without suicidal ideation [7].

Additionally, depression may be related to a risk for use of alcohol and illicit drugs in teenage mothers [14], as well as marijuana and tobacco in another study [19]. Cigarette smoke exposure in itself is associated with a higher risk of school-aged children developing behavioral problems, such as hyperactivity, attention deficit disorder, or peer relationship problems [20]. Controlling for other social influences, children who were exposed to tobacco smoke only prenatally have a 1.9 times higher risk of developing abnormal behavioral symptoms in comparison to children without any exposure, and the risk for such children first exposed to tobacco smoke after birth is 1.3 times higher.

Depression is also identified as a risk for rapid repeat childbearing, defined as experiencing two pregnancies within less than 24 months of each other [21]. These authors also found that trauma increased risk. There is evidence that teenage parents have a high risk for experiencing a traumatic event [7]. One common outcome of experiencing trauma is depression [22]. Indeed, depression is more commonly experienced than post-traumatic stress disorder.

Fortunately, it does not appear that depression is inevitable as adolescent mothers proceed into adulthood. Using data from the National Longitudinal Survey of Youth, women ages 27–29, who had been adolescent childbearers, were assessed for depression [23]. If women were unmarried, they were more depressed than women who first give birth as married adults. However, the psychological health of married teenage mothers in later life was as good as that of married adult mothers, whereas unmarried adult mothers and unmarried teenage mothers had similarly poor outcomes. The findings of this study suggest that marital status, rather than age at first birth, may be more relevant for later-life psychological health. Marriage, therefore, seems to be a protective factor for adolescents who experienced early childbearing for outcomes in later adulthood.

Similar results were found in that long-term mental health outcomes were based on other factors that contributed to adolescent pregnancy to begin with [24]. A similar study following women to midlife, involving both British and U.S. participants, found that mental health problems in adolescent parents persisted over the lifespan. The pattern was different by country, though: for American subjects, the effect went away when controlling for educational level [25]. It appears from this study that other environmental factors, ones that often predict adolescent pregnancy initially, are some of the same factors, at least in the United States, that may result in the persistence of mental health problems. This pattern may not be the same in other developed countries.

However, the presence of depression in mothers presents many risks for children. A mother who is depressed may have needs for nurturing and care that can interfere with her ability to meet her children's emotional and social needs [26]. Mothers who are depressed may be emotionally unavailable and feel a sense of helplessness in the midst of parenting challenges. Parents may model depressive affect, thinking patterns, and behaviors for their children and then reinforce their children's depressive behaviors. Depressed parents also tend to see their children's behavior in a negative light, using low rates of reward and high rates of punishment, or responding indiscriminately to the child's behavior [27]. As a result of these reasons, children of mothers with depression are at elevated risk of depression themselves [27]. For this reason, it is important to study variables that may impact depression.

In the research on depression in teenagers who are pregnant and parenting, the variables of social support and maltreatment have been studied for their connection to depression. Social support [28], specifically that involving the adolescent's mother and partner [14,29], has been linked to depression. This connection has stood up in both cross-sectional [29] and longitudinal research [14,28] and during periods of pregnancy [14,29] postpartum [14], and up to one year after birth [28].

Maltreatment and its association with depression in teenage pregnancy has also been a focus. In a Canadian study of 252 pregnant adolescents, a history of sexual abuse was associated with depression [30]. Both physical and sexual abuse were also associated with depression in another sample of 116 pregnant adolescents [31]. One of the reasons hypothesized for the higher rate of depression, beginning in adolescence for females compared to males, is the fact that the rate of sexual abuse is higher in females than in males [32] and experiencing abuse may lead to risk for depression. A meta-analysis by [33] estimated the associations between depression and different types of childhood maltreatment, finding that psychological abuse and neglect were most strongly associated with the outcome of depression, and sexual abuse was also related to a lesser extent.

In sum, depression is associated with adolescent pregnancy across the continuum of outcomes—risk for adolescent pregnancy, birth outcomes, substance use, risk for depression in children, and, depending on the country, possibly depression in later life.

3. Conduct Problems

Oppositional defiant disorder is characterized by a pattern of negativistic, hostile, and defiant behaviors toward authority figures [34]. Conduct disorder also involves an entrenched pattern of behavior, but in this diagnosis the basic rights of others or major age-appropriate societal norms or rules are violated [34]. In the research on conduct problems, it is often referred to as aggressive or antisocial behavior, and, at times, juvenile delinquency is considered a proxy measure for the presence of conduct disorder.

While rates of ODD are fairly comparable for males and females, CD is more common in males. For CD in the United States, the lifetime prevalence overall is 9.5%, with males at 12% and females at 7.1% [35].

The risks for developing conduct problems in children are similar to the ones that may contribute to adolescent pregnancy. Such risks include poverty, unemployment, community disorganization, availability of drugs, the presence of adults involved in crime, overcrowding, community violence, and racial prejudice [36–38]. These risks understandably affect parenting abilities, which in turn are linked to the development of conduct problems in youth [39].

Risk-taking is part of the pattern of conduct problems in youth [40]. Although a history of conduct problems predicts earlier sexual involvement for both boys and girls, the consequences of sexual behavior are more serious for girls because they may become pregnant [41]. Using a large sample archival data from state agencies involving 70,200 females [14], found that girls who had been referred to a state juvenile justice department were three and a half times more likely to have a child as a teenager than girls who had not been arrested.

In another study, the relationship between conduct problems at age eight and teenage pregnancy by the age of 18 years was analyzed in 491 girls [42]. A statistically significant association was found between early conduct problems and later risk of teenage pregnancy, with more severe problems bearing greater risk than milder conduct problems. The authors explain this elevated risk of teenage pregnancy as being influenced by social and family factors that are correlated with early conduct problems, such as the ones discussed above. An additional process is increased risk-taking, which included early sexual behavior and risk for adolescent pregnancy.

Conduct problems are also associated with repeat childbearing. Primarily African-American adolescents (N = 354) completed individual interviews during pregnancy and at 24 months postpartum [43]. Rapid repeat pregnancy was common (42%). Baseline reports of later age at

menarche and a greater likelihood of aggression were significantly associated with having a rapid repeat pregnancy within 24 months.

Since people with conduct problems tend to have low educational achievement, under-employment, and low income, this puts any children of such parents at risk for similar problems, as well as early childbearing [44]. There is also the problem of assortative matching; adolescent girls with conduct problems may associate with males with similar issues. If they have children with these partners, both genetic and environmental risks are increased for any children born in such relationships [41].

4. Discussion and Implications

Even though depression and conduct disorder, in particular, are associated with adolescent pregnancy across the continuum of outcomes, the direction of causality is unclear and likely complex. Given this caveat, the main implication emerging from this review involves the fact that there are common risk factors for both depression and conduct disorder, as well as adolescent pregnancy. At a primary level, therefore, these are risks that need to be ameliorated: poverty; living in high crime, crowded neighborhoods; lack of education and unemployment; maltreatment in childhood and other adverse childhood experiences; and inadequate housing. These same risk factors are also responsible for the fact that teenagers from such neighborhoods fail to receive adequate mental health services [36,37].

People from ethnic minorities are particularly underserved when it comes to treatment (e.g., [3,45]). Adolescents from ethnic minorities are also disproportionately represented in those that bear children early. Together, African-American and Latina adolescents comprised 57% of U.S. teen births in 2013 [1]. Timely treatment of mental health disorders when they arise is key to preventing continued problems and adverse consequences, such as premature pregnancy, associated with those problems, and to prevent problems from becoming entrenched [46].

Interventions for both conduct problems and depression have received research support. Since family factors are often involved with the transmission of antisocial and aggressive behavior and environmental control may be the most amenable system to target for change, parent- and family-involved treatments have received the best evidence. Parent training is based on operant behavioral theory, in which reinforcement plays a key role in determining future behavior. In this model, parents are taught various skills, including: specifying goals for behavioral change; tracking target behaviors; positively reinforcing prosocial conduct through the use of attention, praise, and point systems; and employing alternative discipline methods, such as withdrawal of attention, time out from reinforcement, and removal of privileges. Recently, a meta-analysis was undertaken of all treatment studies that addressed disruptive behavior in children and adolescents [47]. Parent-only interventions (typically parent training) performed as well as multi-component interventions (ones that had parent, child, and possibly school or other systems interventions), and better than child-only interventions.

Most of the family models that have developed with adolescents have been in response to their contact with other systems, namely the juvenile justice system, and are multi-component interventions. Drawing on family systems theory and Bronfenbrenner's (1979) ecological model as the theoretical basis, multisystemic therapy (MST) views the juvenile offender as embedded in a context of multiple and interrelated systems [48]. The child's own intrapersonal system (i.e., cognitive ability, social skills), the parent–child system, the family system, the school system, peers, and the neighborhood system are targeted for intervention. However, a systematic analysis of the data indicates that among the various outcome measures across studies, none showed significant differences from "treatment as usual" [49]. Because training and supervision in the MST model are costly, agency personnel need to be aware of these findings.

Functional family therapy (FFT), which has also been applied with juvenile offenders, integrates systems, cognitive, and behavioral theories [50]. From this perspective, juvenile offending and other clinical problems are conceptualized from the standpoint of the functions they serve for the family

system and its members. The goal of FFT is to alter maladaptive interaction and communication patterns so that more direct means of fulfilling these functions can develop. Functional family therapy combines knowledge about parent–child interactions and social learning, along with knowledge about the individual cognitive styles that influence juvenile offending. The model has also been referred to as behavioral systems family therapy [51]. Although a literature review supported FFT as an efficacious treatment [52], a systematic review being conducted should tell us more about the benefits of this treatment [53].

In an overall examination of family interventions for adolescents with conduct problems [54], found eight trials. Although parent- and family-focused treatment reduced time spent by youth in residential treatment and other institutional settings, incarceration and arrest rates were not affected. Further, no significant differences between parent/family interventions and other types of treatment emerged on psychosocial outcomes, such as family functioning and youth behavior. Therefore, the impact of family-involved treatment seems to offer certain benefits and cost savings, since residential treatment is an expensive alternative.

More recently, an examination of family systems therapies found that family therapy compared to no treatment or other treatments reduced delinquency outcomes. Although the effect was small [55], this can still translate into cost savings and important benefits to youth and their families.

For depression in adolescence, cognitive behavioral therapy and interpersonal therapy have received research support [56]. Interventions based on cognitive behavioral models include: (1) Behavioral models focus on the development of coping skills, especially in the domain of social skills and choosing pleasant daily activities, so that the youth receive more reinforcement from their environments; and (2) cognitive models include assessing and changing the distorted thinking that people with depression exhibit, in which they cast everyday experiences in a negative light (e.g., [57]).

Interpersonal therapy (IPT) is a brief (12-session), psychodynamic intervention focusing on how current interpersonal relationships have contributed to depression and helping teens repair these conflicts [58]. The general goals of IPT are to decrease depressive symptoms and to improve interpersonal functioning in the areas of role transitions, grief processes, interpersonal disputes, and interpersonal deficits. As indicated in the studies reviewed in this article, relationships with mothers and partners for the pregnant adolescent are fraught with potential conflict due to the early pregnancy itself, but these are important relationships to center on, as they can affect depression in pregnant and parenting teens, which may have important effects on birth outcomes, later substance use, repeat childbearing, and parenting abilities that may affect their offspring long-term.

Conflicts of Interest: The author declares no conflict of interest.

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