

Do Late Adolescent Fathers Have More Depressive Symptoms Than Older Fathers?

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Abstract Although fathers are increasingly a focus of attention in research, there is a dearth of research on depressive symptoms among fathers, especially young fathers with toddlers. This study used longitudinal data to examine what risk factors, including the age status of fathers (e.g., late adolescence, emerging adulthood, and adulthood), may be associated with depressive symptoms of fathers when their children were 3 and 5 years of age. A subsample of families for which complete data were available on all variables was used in the analyses ($n = 1,403$). About 46% of study sample was African American, 27% White, 23% Hispanic, and 4% other race/ethnicity. Paternal depressive symptoms were measured using Composite International Diagnostic Interview-Short Form (CIDI-SF). Late adolescent fatherhood was significantly associated with third-year paternal depressive symptoms but not with fifth-year depressive symptoms. Those who reported low social support were more likely to be depressed at both times. Fathers who did not work for regular pay were more likely to be depressed at the third-year follow-up, but not at the fifth-year

follow-up. Parenting stress and being booked/charged with a crime were not associated with third-year paternal depressive symptoms, but were with fifth-year paternal depressive symptoms. This study emphasizes the importance of screening for depressive symptoms of fathers even before the birth of their child and monitoring and treating postpartum depressive symptoms, as first-year depressive symptoms was a significant predictor for third- and fifth-year depressive symptoms. Service providers should focus on the mental health of fathers as well as mothers to promote healthy environments for their children.

Keywords Paternal depressive symptoms · Risk · Young fatherhood

Introduction

Although there is a relatively strong knowledge base on adolescent mothers and their children, there is still a need to examine how characteristics and obstacles related to early fatherhood may be detrimental to young fathers and influence their support and involvement in families. Prior research has found that young fathers are at increased risk for dropping out of school, face dwindling opportunities for employment (Weinman et al. 2002), and are more likely to be involved in illegal activities (e.g., drug use) (Larson et al. 1996; Weinman et al. 2002; Wiemann et al. 2006), and are likely to experience a breakdown in the relationship with the mothers of their children over time, which may result in reduced paternal contact with children (Bunting and McAuley 2004). Young fatherhood is also associated with multiple-partner fertility (Manlove et al. 2008), and may have greater difficulty supporting their child financially when a child support order is issued because they do not

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understand the rules concerning child support enforcement or do not have the means to follow the orders (Rozie-Battle 2003). As such, young fathers experience various challenges, which may jeopardize their mental health and lead to problematic outcomes (e.g., depression). Because young fathers' psychological and emotional health can influence their interactions and involvement with their children, it deserves more attention from researchers.

The majority of research on prenatal and postnatal depression has focused on mothers because of its high prevalence (11.5% for mothers vs. 7.4% for fathers) (Paulson et al. 2006), and research has shown that maternal depression has negative effects on children (e.g., Knoche et al. 2007; Leadbeater et al. 1996). However, it does not necessarily mean that men are less vulnerable to depression (Kilmartin 2005), and only recently have researchers begun to examine paternal depression (Spector 2006). Researchers have suggested that, due to traditional notions of masculinity, men may hide depression, and thus, it may be overlooked (Brownhill et al. 2005). As a result, paternal depression remains a largely unrecognized phenomenon (Goodman 2004) and a mostly unaddressed policy and public health issue.

In terms of their detrimental impact on parenting and children, paternal depressive symptoms are as serious as maternal depressive symptoms. Previous research found that paternal depression negatively affected children's development (Fletcher et al. 2006; Ramchandani et al. 2005), created adjustment issues, and led to poor parent-child communication (Jacob and Johnson 1997). Ramchandani et al. (2008) found that paternal depression was significantly associated with psychiatric disorders (e.g., oppositional-defiant/conduct disorders) in children. It was also suggested that paternal depression is a contributing risk factor for mental health problems (e.g., depression, alcohol dependence) among children (Spector 2006).

Researchers have suggested that adolescent fathers and young adult fathers may be especially at risk for depressive symptoms, although few studies have actually examined depressive symptoms in these populations. Adolescent and young adult fathers may not be prepared for the responsibilities of fatherhood, and though they may desire to be involved with their children, they often lack the psychological and social resources to assume responsibility for children over time. Early fatherhood may also conflict with other developmental tasks during adolescence, such as completing school, establishing a vocation, resolving identity issues, and gaining independence from parents. These tasks can be stressful for adolescents and young adults. The combination of the lack of resources and heightened levels of stress may have a negative effect on young fathers, leading to elevated levels of depressive symptoms.

A small number of studies have recognized depression among teenage fathers (e.g., Heath et al. 1995; Quinlivan and Condon 2005). Research conducted in Australia found that fathers of children born to teenage mothers showed more severe depression than those born to older fathers, but young fathers frequently did not seek or receive services for treatment of the symptoms (Quinlivan & Condon). Just as teenage mothers are at higher risk for displaying psychological symptomatology than older mothers (Quinlivan et al. 2004), young fathers may be at higher risk for depression than older fathers (Quinlivan & Condon). Therefore, it is critical to determine if early fatherhood is associated with reduced mental health.

In the present study, we compared levels of depressive symptoms among late adolescent, emerging adult, and adult fathers, and we examined whether fathers' risk factors increased the odds of experiencing depressive symptoms. We did not include early adolescent males because the Fragile Families and Child Wellbeing (2009) data had too few very young fathers in the study. Based on previous literature (e.g., Arnett 2000; Comstock 1994; Hutchison 2008), *late adolescent fathers* were defined as those 18–20 years old; *emerging adults* were 21–25; and *adult fathers* were 26 years or older. These categories reflect the typical biological (e.g., physical), psychological (e.g., cognitive), and social (e.g., autonomy) developments of youth (Comstock; Hutchison).

Developmental and Life Course Perspectives

The relationship between young fatherhood and paternal depressive symptoms may be explained by several theoretical perspectives. *Developmental theory* suggests that adolescence is a period in which youth face a variety of daily stressors induced by typical developmental challenges (Seiffge-Krenke 1995; Skinner and Zimmer-Gembeck 2007). Recent findings from neuroimaging studies have shown that the areas of the brain involved in planning and decision making, including the prefrontal cortex—the cognitive or reasoning area, which is important for controlling impulses and emotions—appear not to have yet reached adult dimensions by the early 20s (Gogtay et al. 2004). For example, many adolescent parents may wish to stay in school but lack the planning skills to manage multiple roles. Moreover, adolescents who drop out of school and start searching for jobs often lack experience with finding and keeping a job. The challenges associated with these tasks are frequently beyond the coping capacity of adolescent parents and can result in crises for the teenager. These crises may lead to higher levels of depressive symptoms in the adolescent father.

There is also evidence that adolescents continue to experience high levels of egocentrism. Recent studies have

suggested that egocentrism persists until late adolescence and early adulthood (Schwartz et al. 2008). A common aspect of egocentrism in adolescence is the belief that the one is special, unique, and invulnerable to harm. These self-oriented beliefs may make it difficult for the father to focus on the needs of the infant. Indeed, the needs of the infant are likely to conflict with the needs of the adolescent father. Such conflicts may be beyond the coping capacity of the adolescent or young father. The transition to adulthood involves becoming an independent and self-sufficient individual (Arnett and Taber 1994), and in order to make a successful transition from one developmental stage (e.g., adolescence) to another (e.g., adulthood), one needs the skills or resources to do so (Hogan and Astone 1986). Yet, late adolescent fathers may not be ready for this critical transformation. Although youth struggle to adapt to changes, becoming a father at an early age could jeopardize their mental health and emotional well-being.

An *interpretive life course* perspective (see Forste et al. 2009) also provides a framework for understanding the link between young fatherhood and paternal depressive symptoms because it highlights how the sequencing and timing of life events can influence the meaning of these events. Being a father during the transition to adulthood may influence the young father's perception of fatherhood. Marsiglio and Cohan (1997) argue that adolescent and young fathers may not possess the maturity or resources necessary to respond adequately to paternal responsibilities in the same way as adult fathers. There may be discrepancies between the expectations that young fathers have for themselves and others and the fathers' limitations, which can generate depressive symptoms in young fathers. Becoming a father creates new demands on men to become more responsible for themselves and others. Many fathers feel pressure, both from within themselves and from others, to provide financially for the child. They are also likely to feel pressured to assist with child care at times when they might prefer to socialize with friends. These expectations may be more difficult to fulfill for young fathers than adult fathers because this would mean putting aside one's own personal needs in order to attend to the needs of child and the child's mother.

Risk Perspective and Risk Factors for Paternal Depressive Symptoms

We examined other important risk factors that increase the likelihood that late adolescent and emerging adult fathers will experience depressive symptoms. The *risk perspective* suggests that certain psychological or social factors raise the probability that a person will experience poor consequences (Harvey and Delfabbro 2004; Specht et al. 2003), including depressive symptoms. "Risk" is defined as conditions that potentially lower fathers' mental health. A person's

experience with risk factors may make him/her more susceptible to depressive symptoms. This perspective is particularly important for studying young fathers because they are likely to have higher levels of risk than adult fathers because of the developmental stage that youth experience (e.g., unstable transitions with many changes and challenges) and off-timing events (e.g., becoming a father). Therefore, along with the age status of fatherhood, fathers' illegal involvement, unemployment status, lack of involvement with their child, lack of social support, parenting stress, a history of paternal depressive symptoms, and maternal depressive symptoms were considered risk factors in this study.

Legal problems (e.g., being charged with having committed a crime) have been identified as a risk factor for young fathers (Arnett 1992), which may lead to negative outcomes. Bronte-Tinkew et al. (2007) suggested that a criminal history may have a long-term effect on fathers and is associated with depression. Having legal problems may hinder men from fulfilling their role as a father or create a disjuncture from the expectations as a father, leading to negative psychological consequences (Pleck 1995). Thus, being involved in the criminal justice system may weaken fathers' mental health, leading to depression (Hoard and Anderson 2004).

Unemployment may distort the traditional role of the male in a household (Conger and Elder 1994), and Hoard and Anderson (2004) found that higher depression was significantly associated with unemployment status among low-income, nonresident fathers. Moreover, Chuck et al. (2009) found a link between a change in work status and depression among men. In particular, young fathers may be in the greatest danger of not being able to provide financial support (e.g., child support payments) due to the barriers to employment, even though that support may be important to young fathers' perceptions of fatherhood as well as the development of their children (Bunting and McAuley 2004). Therefore, lack of financial ability of fathers could be associated with fathers' becoming more prone to depressive symptoms.

Previous research has found that paternal depression reduced fathers' involvement with their children (Bronte-Tinkew et al. 2007), which may also have an effect on fathers' mental health. Research findings on divorced fathers suggest that reduced contact, time, and exposure to their children may increase the risk for depression (Spector 2006). According to Pleck (1995), a low level of family participation may be viewed as acceptable by men; however, it creates gender role dysfunction and leads to stress and negative psychological strain. Although scholars have examined whether depressive symptoms reduced father involvement, it is important to investigate if the reverse relationship is supported with more general study sample. Therefore, this study will consider a lack of paternal involvement with their children as a risk factor for depressive symptoms.

Social support has been recognized as a protective factor in previous research. Belle (1989) suggested that youth usually need more social support than older adults to feel a sense of well-being and to be involved in positive life activities; it is likely, however, that young fathers may have little or no social support (Bunting and McAuley 2004). It was found that low social support was associated with depression in fathers (Bielawska-Batorowicz and Kosakowska-Petrycka 2006; Hoard and Anderson 2004; Spector 2006). It was also found that social support may have a mediating effect on depression (Lee et al. 2009). In another study done with expectant fathers, poor social support was associated with higher psychological distress (Boyce et al. 2007). In short, a lack of social support may hinder fathers from adjusting to the role of father and may create mental strain.

Parenting stress was found to be one of the risk factors that affect individual functioning because young parents are not prepared to fulfill the responsibilities of a parent (Dellmann-Jenkins et al. 1993). Spector (2006) found that life or family stress was associated with paternal depression. Saisto et al. (2008) also found that parental stress was associated with depression among the fathers of toddlers. Thus, stress is likely to have an adverse effect whereas support has a buffering influence on paternal depressive symptoms.

Finally, paternal depressive symptoms from previous years and maternal depressive symptoms were considered risk factors in this study. Previous research showed that a personal history of depression was associated with paternal postpartum depression (Matthey et al. 2000; Ramchandani et al. 2008). In this study, maternal depression was also considered one of risk factors for paternal depressive symptoms because Goodman (2004) suggested that one parent's depression may affect the health and well-being of all the members of the family. Dudley et al. (2001) found that depression in one parent was moderately correlated with that of the other parent. In other words, a mother's depression may affect paternal depression (Areias et al. 1996; Bielawska-Batorowicz and Kosakowska-Petrycka 2006; Goodman 2004). These key predictors, along with young fatherhood, were used to examine paternal depression at third-year and fifth-year follow-up after the focal child's birth.

In this study, a number of variables were controlled to tease out the function of age status of fathers and other risk factors associated with paternal depressive symptoms. Paternal race was controlled because previous research findings on race and its relationship with depressive symptoms were equivocal (Bronte-Tinkew et al. 2007). The WHO International Consortium in Psychiatric Epidemiology (2000) reported that low educational attainment may be associated with mental disorders, including depression. Young motherhood (i.e., whether the child was

born to mothers who were younger than 21 years at the time of their child's birth) were also controlled because previous research found that depression in young mothers is common (Eshbaugh 2006), and they are more likely to become depressed prenatally and postnatally than adult mothers (Lanzi et al. 2009). The child's temperament was controlled in this study because it was found that the negative perceptions of the child's temperament were associated with parental depression (Dudley et al. 2001). The child's gender was controlled because there was an association between paternal depressive symptoms and boys' prosocial behavior (Cummings et al. 2005). Marital/relationship status with the mother was also controlled as previous research indicated that partner relationship was a significant predictor for the postnatal mood of fathers (Matthey et al. 2000). Previous study found that family structure influenced depressive symptoms in men before and after their child's birth (Deater-Deckard et al. 1998).

The Current Study

Given depression's potential negative effects on parent-child interaction, interparental relationships, and child development, it is important to compare young fathers' depressive symptoms to that of adult fathers. Also, more research on paternal depressive symptoms should be conducted to determine what risk factors, including young fatherhood, are associated with paternal depressive symptoms. In this study, we compared the levels of depressive symptoms in young and adult fathers. We also focused on individual and social risk factors commonly experienced by urban males in low-income contexts and that have been shown to be related to a risk for depressive symptoms. These include becoming a father at a young age, being charged/booked for participating in criminal behavior, unemployment, less involvement with their children, lack of social support, prior parenting stress and/or depressive symptoms, and maternal depressive symptoms. These risk factors may increase the likelihood of depressive symptoms in fathers partly because the role of father can be jeopardized (i.e., gender role dysfunction).

Moreover, it is essential to examine factors associated with paternal depressive symptoms when the child is a toddler because this is an important stage for child development that affects a child's readiness for school. It is also a challenging time for parents, who must provide consistent positive and nurturing opportunities for their children if they are to promote their development. Furthermore, prior research shows that children from high stress families begin to show cognitive deficits as early as 2 years of age (Klebanov et al. 1998). When risk factors that affect paternal depressive symptoms at different stages of a

child's development are recognized, more effective intervention may be possible. Therefore, we examined the following hypotheses. First, late adolescent fathers will report significantly higher levels of depressive symptoms than adult fathers when children are 3 and 5 years old. Second, risk factors (e.g., age status of fatherhood, history of criminal behavior, unemployment, less involvement with their children, lack of social support, parenting stress prior depressive symptoms, and maternal depressive symptoms) will be positively associated with paternal depressive symptoms for third-year depressive symptoms and for fifth-year depressive symptoms. Third, emerging adult fathers will show similar pattern as late adolescent fathers, but at a lesser degree than adult fathers.

Methods

Data

We used data from the Fragile Families and Child Well-being (FFCW) study (Reichman et al. 2001), a longitudinal birth cohort study that began in 1998. The FFCW study collected data from nearly 5,000 families that were interviewed at the birth of a child and followed up when the child was 1, 3, and 5 years old. FFCW uses a stratified random sample from 20 US cities with populations of 200,000 or more. Stratification was based on the policy environments and labor market conditions in different cities rather than on geography. At baseline, data were collected from 4,898 births in 75 hospitals with 3,712 births to unmarried mothers and 1,186 births to married mothers. Data from both fathers' and mother's reports were used.

Subjects

For the present study, we examined the subsample of families for which complete data were available on all study predictor and dependent variables assessing depressive symptoms of fathers at years three and five ($n = 1,403$). In this study, the age status of fatherhood was divided into three categories: (1) 18–20 years old (late adolescents); (2) 21–25 (emerging adults); and (3) 26 and older (adult fathers). Adult fathers were the reference group in the multivariate analyses. The age categories reflect the typical biological, psychological, and social developments of youth (Comstock 1994; Hutchison 2008) as well as the conceptualization by Arnett (2000).

Description of the Sample

Table 1 presents the characteristics of the study sample. About 11% of the sample were late adolescents ($n = 158$),

followed by emerging adults (29.01%; $n = 407$) and adults (59.73%; $n = 838$). Almost 46% of fathers were African American, and the majority of fathers (57.66%) had a high school or lower level of education at the time of their child's birth. About 76% of fathers were either married or cohabiting with their child's mother at the first-year follow-up, although it dropped to 72% by the third-year follow-up.

Measures

Paternal and Maternal Depressive Symptoms (First-Year, Third-Year, and Fifth-Year Follow-Ups)

The mental-health scale for depression-related questions was derived from the Composite International Diagnostic Interview-Short Form (CIDI-SF), Section A (Kessler et al. 1998). The item examples combined to create an index for paternal and maternal depressive symptoms were: losing interest, more tired, gaining/losing weight by 10 pounds, trouble with sleeping, trouble with concentrating, feeling down, and thinking about death. The items with affirmative responses were summed; a higher score indicated higher depressive symptoms (first-year paternal and maternal depressive symptoms: $\alpha = .90$ and $\alpha = .90$, respectively; third-year paternal and maternal depressive symptoms: $\alpha = .86$ and $\alpha = .79$, respectively; fifth-year paternal depressive symptoms; $\alpha = .86$; see FFCW, 2009). These variables were dichotomized based on whether or not a father has a depressive symptoms score of 3 or more. In the multivariate analyses, paternal and maternal depressive symptoms at the first-year follow-ups were used as control variables; paternal depressive symptoms at the third-year follow-up were used as a dependent variable (Model 1). Paternal and maternal depressive symptoms at the third-year follow-up were used as control variables; paternal depressive symptoms at the fifth-year follow-up were used as a dependent variable (Model 2).

Age Status of Fatherhood (Baseline)

As mentioned earlier, it was measured at the time of the birth of the focal child. If a father was between 18 and 20, he was categorized as a "late adolescent" father. Fathers who were between 21 and 25 were grouped as "emerging adults." The reference group was the adult fathers who were 26 years old or older.

Informal Social Support—Expected (First-Year and Third-Year Follow-Ups)

Expected informal social support was constructed using a set of questions that asked fathers whether they could expect to receive help with a loan of \$200, housing, co-sign for loan for \$1,000, and emergency child-care issues "next

Table 1 Descriptive analysis of study sample ($n = 1,403$)

	All fathers		
	N	%	M (SD)
Age status of fathers			
Late adolescents	158	11.26	
Emerging adults	407	29.01	
Adults	838	59.73	
Race/ethnicity			
White	376	26.80	
Black	644	45.90	
Hispanic	327	23.31	
Other	56	3.99	
Education			
Less than high school	374	26.66	
High school	435	31.00	
Some college	381	27.16	
College+	213	15.18	
Marital status (1st year)			
Married	595	42.41	
Cohabiting	469	33.43	
Visiting	268	19.10	
No relationship	71	5.06	
Marital status (3rd year)			
Married	641	45.69	
Cohabiting	370	26.37	
Visiting	314	22.38	
No relationship	78	5.56	
Regular work for pay			
1st year	1,157	82.47	
3rd year	1,155	82.32	
Ever being charged (1st year)	419	29.86	
Being charged since 1st year (3rd year)	159	11.33	
Young motherhood (≤ 21)	411	29.29	
Paternal depressive symptoms			
1st year	123	8.77	
3rd year	168	11.97	
5th year	148	10.55	
Maternal depressive symptoms			
1st year	192	13.68	
3rd year	264	18.82	
Paternal parenting stress			
1st year	1,403	8.25 (2.67)	
3rd year	1,403	8.25 (2.68)	
Paternal involvement			
1st year	1,403	38.40 (18.73)	
3rd year	1,403	45.66 (21.97)	
Paternal social support			
1st year	1,403	7.35 (1.11)	
3rd year	1,403	7.31 (1.18)	

Table 1 continued

	All fathers		
	N	%	M (SD)
Child's gender (boy)	716	51.03	
Child's temperament (1st year)	1,403		15.18 (4.40)
Child's temperament (3rd year)	1,403		3.15 (2.39)

year” from someone. If the father responded affirmatively on any item, he received a score of 1. All items were summed to indicate that a higher score meant higher expected informal social support ($\alpha = .72$ and $\alpha = .76$, respectively).

Paternal Involvement with Child (First-Year and Third-Year Follow-Ups)

Paternal involvement was used to assess the degree to which fathers were engaged in positive parenting activities with the focal child. Different types of direct child care and activities (e.g., singing songs with child, hugging or showing physical affection to child, telling stories, reading stories to child) that fathers provided in a typical week were assessed by mothers on a scale from 0 (“never”) to 7 (“every day”) (10 items for the first-year follow-up; 13 items for the third-year follow-up) ($\alpha = .87$ and $\alpha = .88$, respectively).

Paternal Parenting Stress (First-Year and Third-Year Follow-Ups)

Paternal parenting stress was assessed using the shortened version of the *Parenting Stress Index* (PSI) (Abidin 1995). The shortened PSI consists of four self-report questions arrayed on a four-point Likert-type scale (ranging from “strongly disagree” to “strongly agree”), including such questions as “being a parent is harder than I thought it would be” and “I feel trapped by my responsibilities as a parent” ($\alpha = .57$ and $\alpha = .63$, respectively). Alpha levels were low, perhaps due to the number of items used to assess parenting stress. However, the PSI, both full and short forms, has been known for its reliability and validity and has been used in various studies since its inception (Haskett et al. 2006). Also, a recent study tested the validity of the short form of the PSI for low-income fathers with young children and found it reliable and valid for a diverse group of fathers (McKelvey et al. 2009).

Being Booked/Charged

It was a first-year follow-up question. Fathers were asked whether they had ever been booked or charged with

breaking the law, and the third-year follow-up question asked whether a father had been booked or charged with breaking the law since the child's first birthday. The reference group was those who had not been booked or charged at either point in time.

Paternal Employment (First-Year and Third-Year Follow-Ups)

Paternal employment status was dichotomized and measured whether a father worked for regular pay. The reference group was those who worked for regular pay.

The following variables were controlled in this study.

Paternal Race/Ethnicity (Baseline)

It was coded as (1) White non-Hispanic, (2) Black non-Hispanic, (3) Hispanic, and (4) Other. White non-Hispanic fathers were the reference group.

Paternal Education (Baseline)

It was categorized as (1) less than high school, (2) high school/GED, (3) some college, and (4) more than college.

Marital Relationship (First-Year and Third-Year Follow-Ups)

It was reported by the mother at the first-year and third-year follow-ups and categorized into: (1) married to and living with the father ("married"); (2) still romantically involved and living together with the father, but not married ("cohabiting"); or (3) seeing each other but not living together ("visiting").

Young Motherhood (Baseline)

It was measured at the time of the birth of the focal child. If the mother was 21 years or younger, she was categorized as a "young" mother.

Child's Gender (Baseline)

It was coded "0" for female and "1" for male.

Child's Temperament (First-Year and Third-Year Follow-Ups)

First-year child's temperament was taken from the first-year follow-up survey (EAS temperament questionnaire; see Mathieson and Tambs 1999). Six items were used to create a composite score of child's temperament/behavior. Mothers were asked to rate how well each statement

described their child; the scale ranged from "1" (not at all like my child) to "5" (very much like my child). The statements included: "the child tends to be shy," "often fusses and cries," "is very sociable," "gets upset easily," "reacts strongly when upset," and "is very friendly with strangers." Two variables, "sociable" and "friendly," were reverse coded so that higher score indicated a more difficult temperament ($\alpha = .51$). For a composite score of third-year child's temperament, eight items from the Achenbach and Rescorla (2000) scales and diagnostics were used. Examples of items include: "he/she clings to adults or is too dependent"; "his/her feelings are easily hurt"; "he/she gets too upset when separated from parents"; "he/she looks unhappy without good reason"; "he/she has nervous movements, is high strung, tense"; "he/she is self-conscious or easily embarrassed"; "he/she is too fearful or anxious"; and "he/she is unhappy, sad, depressed" ($\alpha = .60$).

Results

Statistical Analyses

Multivariate analyses and logistic regressions were conducted to examine whether young fatherhood (i.e., late adolescence) would be a significant predictor for the outcome variables and what paternal factors would be associated with depressive symptoms at the third-year and fifth-year follow-ups, after controlling for background factors. The variables were entered simultaneously. When reporting results from the logistic regressions, odds ratios were reported to compare the relative strength of the independent variables within the model. Multicollinearity was checked for all models, and variance inflation factors (VIF) were smaller than 1.5.

Bivariate Analyses: Comparisons Among Late Adolescent, Emerging Adult, and Adult Fathers

Bivariate analyses (Table 2) showed some differences among late adolescent fathers, emerging adult fathers, and adult fathers. There were no significant differences among three groups of fathers in terms of depressive symptoms. Late adolescent fathers were less likely to be working at a regular job at the first-year ($\chi^2 = 40.21$; $P < .0001$) and the third-year follow-ups ($\chi^2 = 23.26$; $P < .0001$). Also, late adolescent fathers were more likely to be charged/booked for illegal activities at first-year follow-up ($\chi^2 = 15.93$; $P < .01$). But at the third-year follow-up, it was found that the youngest fathers were more likely to be charged/booked since their child's first birthday

Table 2 Comparisons among adult fathers (26 years and older), emerging adult fathers (21–25), and late adolescent fathers (18–20)

	Adult fathers (<i>n</i> = 838)			Emerging adult fathers (<i>n</i> = 407)			Late adolescent fathers (<i>n</i> = 158)		
	N	%	M (SD)	N	%	M (SD)	N	%	M (SD)
Race/ethnicity****									
White	291	34.73		71	17.44		14	8.86	
Black	332	39.62		214	33.23		98	62.03	
Hispanic	182	21.72		103	25.31		42	26.58	
Other	33	3.94		19	4.67		4	2.53	
Education****									
Less than high school	164	19.57		127	31.20		83	52.53	
High school	225	26.85		148	36.36		62	39.24	
Some college+	449	53.58		132	32.43		13	8.23	
Marital status**** (1st year)									
Married	473	56.44		102	25.06		20	12.66	
Cohabiting	217	25.89		176	43.24		76	48.10	
Visiting	116	13.84		98	24.08		54	34.18	
No relationship	32	3.82		31	7.62		8	5.06	
Marital status**** (3rd year)									
Married	497	59.31		117	28.75		27	17.09	
Cohabiting	170	20.29		137	33.66		63	39.87	
Visiting	136	16.23		122	29.98		56	35.44	
No relationship	35	4.18		31	7.62		12	7.59	
Regular work for pay									
1st year****	731	87.23		318	78.13		108	68.35	
3rd year****	722	86.16		318	78.13		115	72.78	
Ever being charged** (1st year)									
Ever being charged since 1st year**** (3rd year)	219	26.13		137	33.66		63	39.87	
Being charged since 1st year**** (≤21)	64	7.64		57	14.00		38	24.05	
Young motherhood**** (≤21)									
Young motherhood**** (≤21)	71	8.47		201	49.39		139	87.97	
Paternal depression case									
1st year	67	8.00		41	10.07		15	9.49	
3rd year	88	10.50		54	13.27		26	16.46	
5th year	81	9.67		48	11.79		19	12.03	
Paternal depressive symptoms score									
1st year									
None	766	91.41		359	88.21		139	87.97	
Score 1–2	5	.60		7	1.72		4	2.53	
Score 3–8	67	8.00		41	10.07		15	9.49	
3rd year									
None	739	88.50		344	85.15		127	81.41	
Score 1–2	8	.96		6	1.49		3	1.92	
Score 3–8	88	10.54		54	13.37		26	16.67	
5th year									
None	755	90.10		355	87.22		138	87.34	
Score 1–2	2	.24		4	.98		1	.63	
Score 3–8	81	9.67		48	11.79		19	12.03	
Maternal depression case									
1st year	110	13.13		58	14.25		24	15.19	
3rd year*	142	16.95		83	20.39		39	24.68	

Table 2 continued

	Adult fathers (<i>n</i> = 838)			Emerging adult fathers (<i>n</i> = 407)			Late adolescent fathers (<i>n</i> = 158)		
	N	%	M (SD)	N	%	M (SD)	N	%	M (SD)
Paternal parenting stress									
1st year*			8.18 ^a (2.68)			8.18 ^b (2.61)			8.82 ^{a,b} (2.69)
3rd year**			8.15 ^a (2.66)			8.19 ^b (2.60)			8.91 ^{a,b} (2.85)
Paternal involvement									
1st year*			39.59 ^a (17.55)			36.34 ^a (20.56)			37.45 (19.45)
3rd year**			47.14 ^a (20.28)			43.57 ^a (24.00)			43.16 (24.49)
Paternal social support									
1st year			7.38 (1.10)			7.30 (1.16)			7.32 (1.04)
3rd year*			7.37 (1.14)			7.22 (1.23)			7.18 (1.21)
Child's gender (boy)									
Child's temperament (1st year)			15.16 (4.38)			15.21 (4.49)			15.19 (4.27)
Child's temperament**** (3rd year)			2.90 ^{a,b} (2.28)			3.45 ^a (2.57)			3.66 ^b (2.26)

To compare means of child's temperament, paternal parenting stress, paternal involvement, and paternal social support, ANOVA tests were conducted. Differences were denoted by superscript "a or b"

* $P < .05$; ** $P < .01$; *** $P < .001$; **** $P < .0001$

($\chi^2 = 39.71$; $P < .0001$). Late adolescent fathers reported higher parenting stress ($M = 8.82$, first-year follow-up; $M = 8.91$, third-year follow-up), and the means were significantly different from those of adult fathers ($F = 4.00$; $P < .05$, first-year follow-up; $F = 5.45$; $P < .01$, third-year follow-up). Emerging adult fathers were less involved with their child at the first-year and third-year follow-ups ($M = 36.34$, first-year follow-up; $M = 43.57$, third-year follow-up), and the means were significantly different from those of adult fathers ($F = 4.38$; $P < .05$, first-year follow-up; $F = 4.80$; $P < .01$, third-year follow-up). Correlation results (table not shown) showed that young fatherhood, previous history of depressive symptoms, paternal parenting stress, low level of social support, being charged/booked, and unemployment status were associated with higher paternal depressive symptoms at the third-year and/or the fifth-year follow-ups.

Multivariate Analyses: Factors Associated with Third- and Fifth-Year Paternal Depressive Symptoms

First-Year Factors Predicting Third-Year Paternal Depressive Symptoms

Late adolescence fatherhood was significantly associated with third-year paternal depressive symptoms (Table 3). Those who became a father between the ages of 18 and 20 years were almost twice as likely to be depressed at year three as adult fathers (reference group). Depressive symptoms score from the first-year follow-up was most significant in predicting the third-year paternal depressive

symptoms. Social support was a significant predictor, and those who reported low social support were more likely to have higher depressive symptoms. Those who did not work for regular pay were 66% more likely to be depressed as those who worked for regular pay. Parenting stress and being booked/charged were not associated with third-year paternal depressive symptoms.

Third-Year Factors Predicting Fifth-Year Paternal Depressive Symptoms

Age status of fatherhood was no longer significantly associated with fifth-year paternal depressive symptoms. Depressive symptoms score from the previous year was significantly increased the odds of reporting higher depressive symptoms at the fifth-year follow-up. Parenting stress was a significant predictor for paternal depressive symptoms, and those who reported higher parenting stress were more likely to report paternal depressive symptoms. Low social support was associated with high depressive symptoms for fathers. Being booked/charged since the child's first birthday was also significantly associated with higher paternal depressive symptoms.

Third-Year Factors Predicting Fifth-Year Paternal Depressive Symptoms While Controlling for First-Year Factors

When the factors from the previous years were included in the model (Model 3), paternal depressive symptoms at first-year and third-year follow-ups, depressive symptoms score

Table 3 Logistic regressions: first-year variables predicting third-year paternal depressive symptoms and third-year variables predicting fifth-year paternal depressive symptoms ($n = 1,403$)

	3rd year paternal depressive symptoms			5th year paternal depressive symptoms					
	Model 1			Model 2			Model 3		
	Odds ratio	95% Conf. Interval		Odds ratio	95% Conf. Interval		Odds ratio	95% Conf. Interval	
Age status of fatherhood									
Adult fathers (ref.)	–	–	–	–	–	–	–	–	–
Emerging adult fathers	1.30	.83	2.04	.85	.52	1.36	.92	.56	1.53
Late adolescent fathers	2.02*	1.04	3.95	.54	.26	1.10	.67	.32	1.43
Depressive symptoms, 1st year (F)	8.57****	5.50	13.35				3.68****	2.22	6.11
Depressive symptoms, 1st year (M)	1.11	.68	1.81				.65	.35	1.19
Parenting stress, 1st year	.98	.92	1.05				1.12**	1.04	1.22
Social support, 1st year	.72****	.63	.83				.83*	.69	.99
Father involvement, 1st year	1.00	.99	1.02				.99	.98	1.01
Being booked/charged, 1st year	1.14	.77	1.68				.96	.62	.99
Not working for regular pay, 1st year	1.66*	1.07	2.56				1.13	.68	1.87
Depressive symptoms, 3rd year (F)				5.50****	3.62	8.35	3.96****	2.49	6.29
Depressive symptoms, 3rd year (M)				1.01	.65	1.59	1.17	.72	1.91
Parenting stress, 3rd year				1.11**	1.03	1.18	1.03	.95	1.12
Social support, 3rd year				.81**	.70	.94	.91	.76	1.07
Father involvement, 3rd year				.99	.98	1.00	.99	.98	1.00
Being booked/charged, 3rd year				1.95**	1.17	3.22	1.88*	1.09	3.26
Not working for regular pay, 3rd year				1.10	.69	1.77	1.00	.60	1.67
LR χ^2	(21)	153.67****		(21)	128.69****		(32)	171.56****	
Pseudo R^2	.1495			.1361			.1814		

Father’s education, race, relationship status (first year for model 1; third year for model 2; both years for model 3), young motherhood, child’s gender and child’s temperament at first year (for models 1 and 3) and child’s temperament at third year (for models 2 and 3) were controlled, but not shown in the table

F father, M mother

* $P < .05$; ** $P < .01$; *** $P < .001$; **** $P < .0001$

from previous years, parenting stress at the first-year follow-up, and being booked/charged at the third-year follow-up were significantly associated with higher paternal depressive symptoms at the fifth-year follow-up.

Discussion

As a large body of research has shown that teenage mothers are at higher risk for presenting psychological symptomatology than older mothers (Quinlivan et al. 2004), and their depressive symptoms have negative effects on children (Knoche et al. 2007; Leadbeater et al. 1996), the depressive symptoms of young fathers should also receive close attention and be recognized as a serious public health and social policy issue. This study used data from a large

longitudinal study of fragile families to examine the relationship between the age status of fathers and their depressive symptoms after the child’s birth. Specifically, the study inquired into whether late adolescent fathers would be at higher risk for depressive symptoms than emerging adult or adult fathers when children were 3 and 5 years old and what risk factors might be associated with paternal depressive symptoms at these times. We hypothesized that late adolescent fathers were at higher risk for experience depressive symptoms than adult fathers. Emerging adult fatherhood, however, was not found to be related to depressive symptoms. It may be that though there are numerous developmental changes that occur during this period (e.g., identity exploration), forming long-term intimate partnerships and childbearing are more normative during early adulthood than during adolescence. As the life

course perspective suggests, normative life transitions are associated with fewer negative outcomes (e.g., depressive symptoms). Also, risk factors, such as unemployment status, criminal involvement, parenting stress, previous history of depressive symptoms, and lack of social support, were found to be associated with increased paternal depressive symptoms. The findings emphasized the importance of identifying factors associated with paternal depressive symptoms and providing interventions as early as possible to help them to stay healthy, mentally and physically, for their family.

The paternal depression rate was not as low as one might expect. In this study, the rates ranged from roughly 8–16%, depending on the age status of fathers and in which year the depressive symptoms were measured. Bronte-Tinkew et al. (2007) found that among residential fathers, approximately 5.4% of them reported major depressive symptoms at the 12-month follow-up. Another study found that 36% of nonresident African American fathers experienced moderate depressive symptoms, and 11% experienced severe depressive symptoms (Davis et al. 2009). Our findings are consistent with other studies that focus on high risk fathers, and that is to say that about twice the number of fathers have major depressive symptoms compared with low risk fathers.

Our main interest for this study, age status of fatherhood, especially late adolescent fatherhood, was a significant predictor of third-year depressive symptoms if first-year depressive symptoms were held constant, but not of fifth-year depressive symptoms. Late adolescent fathers are twice more likely to be at risk for depressive symptoms than adult fathers when their children were about 3 years old. This finding suggests that the effect of age on paternal depressive symptoms may peak during the late adolescence when they are at the initial stage of going through “emerging adulthood,” which is a “grey” period that is neither adolescence nor young adulthood. According to Arnett (2000), during the emerging adulthood, the late teenagers have left the dependency of childhood, but have not fully entered adulthood, and have various options. Overwhelmed by this developmental juncture, and perhaps realizing that their off-time event (i.e., fatherhood) might hinder them from exploring life’s possibilities, young fathers may be at increased risk for depressive symptoms. In other words, it may be that, to a certain point, the rates of depressive symptoms can be a function of age status. According to the National Responsible Fatherhood Clearinghouse (2007), the percentage of 15–24-year-old men with major depressive disorders was the highest, 7.3%, compared to older men, using National Comorbidity Survey-Baseline, 1990–1992. However, previous research on the relationship between age and depressive symptoms has been inconsistent. It is critical to pay more attention to

young fathers at risk for depressive symptoms and investigate differences in paternal depressive symptoms by age.

Biello et al. (2010) found that the mental health scores of young fathers were worse prior to the birth of their child, but their depressive symptoms decreased after the birth of their child. Biello et al. suggest that fathers are more likely to stabilize than young mothers, who are the main caregivers of their children. Thus, it is important that young fathers receive more attention from researchers and practitioners immediately after their child is born to make sure that they are mentally healthy, able to perform as a father, and help mothers adjust to their role as a caregiver. Moreover, follow-ups should be conducted for the first 3 years, not only for depressive symptoms but also for other issues (e.g., physical health, substance use, multiple partners and/or multiple fertilities) that might affect their mental health status.

Not working for a regular job was associated with higher paternal depressive symptoms at the third-year follow-up. It was consistent with a previous report that unemployed men and fathers suffer major depressive disorder more than the employed (National Responsible Fatherhood Clearinghouse 2007). If a father is unemployed, it may reduce his status in the family. Previous studies have linked economic hardship with depressive symptoms (Conger and Elder 1994). Unemployment also creates stress and frustration for the father because he is not providing financially for his family. Lee et al. (2009) found that lower family income was associated with higher levels of parental depressive symptoms. Chuck et al. (2009) suggested that men facing changes in work status should receive an assessment for depressive symptoms. It is interesting, however, that their regular work status was not associated with fifth-year depressive symptoms. This might indicate that fathers might have obtained under-the-table jobs to support their children; as a result, not having a “regular” job might not have as much effect on paternal depressive symptoms. The findings suggest that policy makers and practitioners should focus on job development and stability for fathers with young children. Skills assessment and development should also be part of an intervention for fathers so that they may be able to stay and obtain a regular job to support their family and stay emotionally healthy.

The study sample of fathers who were booked/charged was more likely to score higher for depressive symptoms than those who had not been involved with the criminal justice system since the first birthday of their child. This finding supports the findings from previous research that a history of criminal conviction is a risk factor for higher rates of major depressive disorders (14.3% of fathers who spent time in jail; Bronte-Tinkew et al. 2007) and that fathers who have new or additional criminal records experience frustration that leads to depression (Hoard and

Anderson 2004). It may be that fathers with criminal records might have believed that they would not be involved in the criminal justice system again. After they have failed, their disappointment might increase their risk of depression. Fathers who were booked/charged after their child was 1 year old may be more depressed or feel helpless about their situation, with increasing needs to provide more for their children as they grow up. Having a criminal record may influence fathers' sense of being responsible for their family, and may affect their mental health. Therefore, it is critical to prevent fathers with criminal records from recidivating.

In this study, bivariate analyses showed that late adolescent fathers were more likely to be booked/charged at both time periods than adult fathers. Shannon and Abrams (2007) suggest that fathers who have been involved in the criminal justice system present economic and social issues for their children and that the fathers themselves may have difficulties with the transition to adult roles and responsibilities. Moreover, negative life outcomes for juvenile delinquent fathers expand to their partners (i.e., mothers of children born to juvenile delinquent fathers) (Unruh et al. 2004). It was also found that juvenile delinquent fathers are more likely to recidivate than non-juvenile-delinquent fathers (Unruh et al. 2003), attain low education, and have poor employment outcomes (Bullis et al. 2002). Even though it was found that juvenile delinquent fathers believed they could be responsible for the baby and mother (Nesmith et al. 1997), these risk factors may influence their mental health, long-term involvement, and support.

Bronte-Tinkew et al. (2007) found that major depression was positively associated with stress in parenting, and Bielawska-Batorowicz and Kossakowska-Petrycka (2006) reported that the high discrepancy between prenatal expectations and experiences related to family after the birth of their child was correlated with depression in men. This discrepancy may increase parenting stress among fathers. In this study, parenting stress was not associated with third-year depressive symptoms but with fifth-year depressive symptoms. Parenting stress, being associated with fifth-year depressive symptoms, may also indicate that as their children become preschoolers, fathers, regardless of age, may have a more difficult time raising their children, which may lead to higher levels of depressive symptoms. This suggests that it is important to provide parenting classes for fathers who are raising preschoolers. Because it is a developmentally significant age for children, it is important that fathers are mentally healthy so that they can stay involved with their children.

This study found a significant association between postpartum depressive symptoms and long-term depressive symptoms. The finding confirms that previous history of depression (see Matthey et al. 2000; Ramchandani et al.

2008) is a risk factor for further depression. Previous research also suggested that high prenatal depression scores were one of the strongest predictors of paternal depression during the postnatal period (Ramchandani et al. 2008). However, this study was not able to investigate prenatal and long-term depressive symptoms among fathers because no data were available on depressive symptoms before the children were born. Detecting paternal depressive symptoms as early as possible may be critical to intervening and preventing future depressive symptoms.

The findings from this study emphasized that a lack of social support is a serious risk factor for fathers and indicates an increased likelihood for depressive symptoms. In other words, social support can play an important role in preventing or decreasing paternal depressive symptoms. Rao et al. (2010) showed that a higher level of social support was a protective factor. Consistent with Rao et al.'s findings, in this study, higher social support decreased the odds of being depressed at the third-year and fifth-year follow-ups. Whether a father is adolescent, young-adult, or older adult, the support available to them plays a significant role in helping fathers with young children stay healthy. Therefore, it is critical to identify the level of social support available to fathers and involve fathers in prioritizing their needs. By intervening to increase the quality and quantity of social support for fathers, paternal depressive symptoms may be decreased or prevented.

It was found that paternal involvement with their children did not predict paternal depressive symptoms at third-year or fifth-year follow-ups. It was anticipated that not being able to be involved with their children might have effects on paternal mental health, but an association was not found. Whether fathers are indifferent or choose not to get involved, lack of involvement may not be a risk factor for paternal depressive symptoms. However, the importance of father involvement in his family has been recognized, and maternal satisfaction with paternal involvement has been found to decrease mothers' postpartum depression (Fagan and Lee 2010). Previous research documented that paternal depression lowers fathers' involvement with children. A study of adult fathers in the Early Head Start program found that fathers who were less depressed were more likely to be involved with their children (Roggman et al. 2002). Howard et al. (2006) noted that regardless of fathers' residential status, fathers, if they stay involved with their children, play an important role in the lives of children born to adolescent mothers. Fathers' depression needs to be treated as early as possible because depression was negatively associated with fathers' engagement with their children (Biello et al. 2010; Bronte-Tinkew et al. 2007), which may lead to the healthier development of the children.

This study's findings also highlight the critical need to screen and monitor both parents' depressive symptoms.

Previous research found that young mothers' depression was a risk factor for reduced sense of parenting efficacy and confidence (Birkeland et al. 2005), an increased degree of disengagement and authoritarian parenting with toddlers (Pelaez et al. 2008), negative feeding interactions with infants (Field et al. 2000), increased behavior problems among preschoolers (Leadbeater et al. 1996), and decreased cognitive abilities among infants (Knoche et al. 2007). Researchers found that the discrepancy between what young mothers' expect from social support and what they receive is a risk factor for depression (Logsdon et al. 2005). Smith and Howard (2008) found that paternal support played an important role in lowering maternal depressive symptomatology. It is suggested that fathers of children born to adolescent mothers affect the mothers' psychological adjustment. The findings, however, are inconsistent: one study found no association between paternal support and maternal depression (Gee and Rhodes 2003). Gee and Rhodes suggested that maternal grandmothers can buffer the negative effects from fathers' strain, and fathers can be both protective and a risk factor for maternal depression among young mothers. Taken together, it is critical to screen and monitor for both parents' mental health and increase protective factors as much as possible.

Strengths, Limitations, and Implications

This study has several strengths. It used large longitudinal data to examine paternal depressive symptoms after their children were born. Moreover, paternal depressive symptoms were examined as a function of age status. Characteristics of late adolescent, emerging adult, and older adult fathers were compared. In addition to the age status at fatherhood, various risk factors were identified to suggest policy, practice, and service implications. The study sample was not necessarily "at risk" fathers, but men from the general population; therefore, more broad implications may be made for a larger group of fathers with young children.

It is also important to note the limitations of this study. First, attrition is an issue with a longitudinal study. Because this study examined depressive symptoms among young-adult fathers by using a complete dataset, many fathers were excluded from the analyses. Second, it is applicable to fathers in urban, large cities, but may not be applicable to those in the rural areas. Third, social desirability may play a role and could have made the depressive symptoms score lower than what it actually is. Fourth, cultural factors (e.g., religious participation, attachment to cultural heritage) that may influence depressive symptoms among fathers were not included in the study. Variables related to cultural factors were deemed inadequate, and, when included in the analyses, did not play a role in predicting depressive

symptoms. Thus, in order to be parsimonious, cultural factors were excluded. Future research should include improved measures of cultural factors and examine their effect on depressive symptoms. Finally, fathers with minor depressive symptoms may not be detected, but it would be important to study them.

Future studies should clarify the relationship between maternal and paternal depressive symptoms. Although previous studies have linked maternal and paternal depression (Bielawska-Batorowicz and Kossakowska-Petrycka 2006; Dudley et al. 2001; Escribà-Aguir and Artazcoz 2011; Paulson and Bazemore 2010), an association was not found in this study. Therefore, further research is necessary to determine in what circumstances maternal depressive symptoms may or may not have an impact on a father's mental health. It is important to conduct more empirical studies examining the relationship between maternal and paternal depressive symptoms. Second, practitioners should incorporate stress management when working with new, young parents as a preventive measure for depressive symptoms. Moreover, when working with young mothers, practitioners should strive to engage the fathers in order to identify—and perhaps treat—unrecognized psychological symptoms (Quinlivan and Condon 2005). Third, fathers with criminal records, especially those who became involved with the criminal justice system after their child was born, should receive more attention from front-line workers. Effort is also needed to prevent fathers from engaging in criminal activities. There should be more collaboration between mental health services and the criminal justice system to intervene with vulnerable fathers. Fourth, services are essential to help fathers get jobs that provide decent wages and working conditions. Moreover, it is critical to assist fathers in keeping their jobs. Unstable employment may be as disadvantageous as chronic unemployment in terms of increased depressive symptoms in fathers. Work development programs should be expanded and, in particular, reach out to fathers with criminal records. In addition, research on under-the-table jobs may be critical in determining its effects on paternal mental health and that of their family members. Finally, when working with young fathers, it is important to identify their social network, the level of social support, the quality of that support, and the availability of support because social support was a significant protective factor that decreased paternal depressive symptoms after a child was born.

Conclusion

This study found that late adolescent fatherhood was significantly associated with higher reporting of depressive symptoms when their children were about 3 years old.

Unemployment status, criminal involvement, parenting stress, previous history of depressive symptoms, and lack of social support were identified as risk factors for paternal depressive symptoms when their children were toddlers or preschoolers. The findings of this study emphasized the importance of screening for depressive symptoms of fathers as early as possible and monitoring and treating depressive symptoms. It is the time to pay more attention to fathers who could be essential resources for both mothers and their children when they are mentally healthy and ready for their parenting role. It calls for proactive interventions from social service providers and health professionals to help creating positive environments for children by working with both fathers and mothers. Collaboration from various health professions and social service providers is essential for identifying vulnerable fathers, detecting paternal depressive symptoms, and providing the necessary programs to educate fathers as well as mothers about the negative consequences of paternal depressive symptoms and help them overcome traditional notions so that they will seek services.

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