



# Pregnant and Parenting Youth in Care and Their Children: A Literature Review

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## Abstract

While general U.S. rates of adolescent pregnancy and childbirth have declined over the past four decades, the rate among adolescents in foster care has not reflected this same drop. Decades of research has indicated negative outcomes for both parenting adolescents and their children compared to their non-parenting peers, however, less is understood about the risks, outcomes and needs specific to adolescents who give birth while in foster care. This comprehensive literature review adds to the knowledge of pregnant and parenting mothers in foster care and their children by identifying and summarizing all relevant studies published between 2011 and 2017. Findings indicate that youth in care have high rates of pregnancy and childbirth, experience multiple risks and negative outcomes, and are in need of various supportive services. Implications for research, practice and policy (need to reduce unintended pregnancy and improve circumstances, identifying successful interventions, expanding knowledge of these youth and their children, and developing two-generation interventions) were also explored.

**Keywords** Mothers in foster care · Child maltreatment · Pregnant and parenting

In recent decades, the national teen pregnancy rate has dropped significantly (Hamilton & Mathews, 2016), however, specific adolescent subgroups remain at an increased risk of adolescent parenthood. Children who have been maltreated are at increased risk for adolescent pregnancy (Boyer & Fine, 1992; Stevens-Simon & Mcanarney, 1994). Not only is maltreatment history a risk factor, but research has consistently found that early pregnancy is more common among girls in foster care and those who recently exited from care in comparison to their peers (Boonstra, 2011; Carpenter, Clyman, Davidson, & Steiner, 2001; Connolly, Heifetz, & Bohr, 2012; Dworsky & Courtney, 2010; Putnam-Hornstein & King, 2014; Svoboda, Shaw, Barth, & Bright, 2012; Turpel-Lafond & Kendall, 2009). Research in the Midwest found that among females in an out-of-home placement at age 17, half reported experiencing a pregnancy by age 19 (Dworsky & Courtney, 2010) and 71% by age 21 (Courtney

et al., 2007). In contrast, a third of women in the comparison group had been pregnant by age 21.

The stress of early parenthood is compounded by the difficulties faced by youth in care. Youth in foster care have a higher risk of victimization and internalizing and externalizing behaviors in comparison to their peers (Coleman-Cowger, Green, & Clark, 2011; Oswald, Heil, & Goldbeck, 2010). More than half of youth in care meet the criteria for at least one mental health diagnosis (Taussig, Culhane, Garrido, & Raviv, 2010). Older youth in care are at risk of aging-out, at a time when a sizeable proportion may become parents. Youth who age-out of care face economic hardship, housing instability, employment difficulties, low educational attainment, and increased risk for drug or alcohol issues (Courtney et al., 2007).

Svoboda et al. (2012) and Connolly et al. (2012) conducted the most recent literature reviews of pregnant and parenting youth in foster care, examining research through 2010. Svoboda et al. (2012) identified the quantitative and qualitative research published between 1989 and 2010 related to pregnant and parenting girls in Child Protective Services (CPS) and summarized key findings and recommendations. They identified similar themes across studies related to (1) barriers and opportunities, (2) mental and physical health needs of youth, (3) influences of trauma

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on sexual development, (4) risks due to lack of financial supports, and (5) the disruption of relationships and living environments for youth in foster care. The authors noted a wide range in the estimated rate of pregnancy among young women in foster care from 16 to 50%. In addition, identified studies highlighted the lack of data collection related to pregnant and parenting youth in care as well as insufficient pregnancy prevention policies for youth.

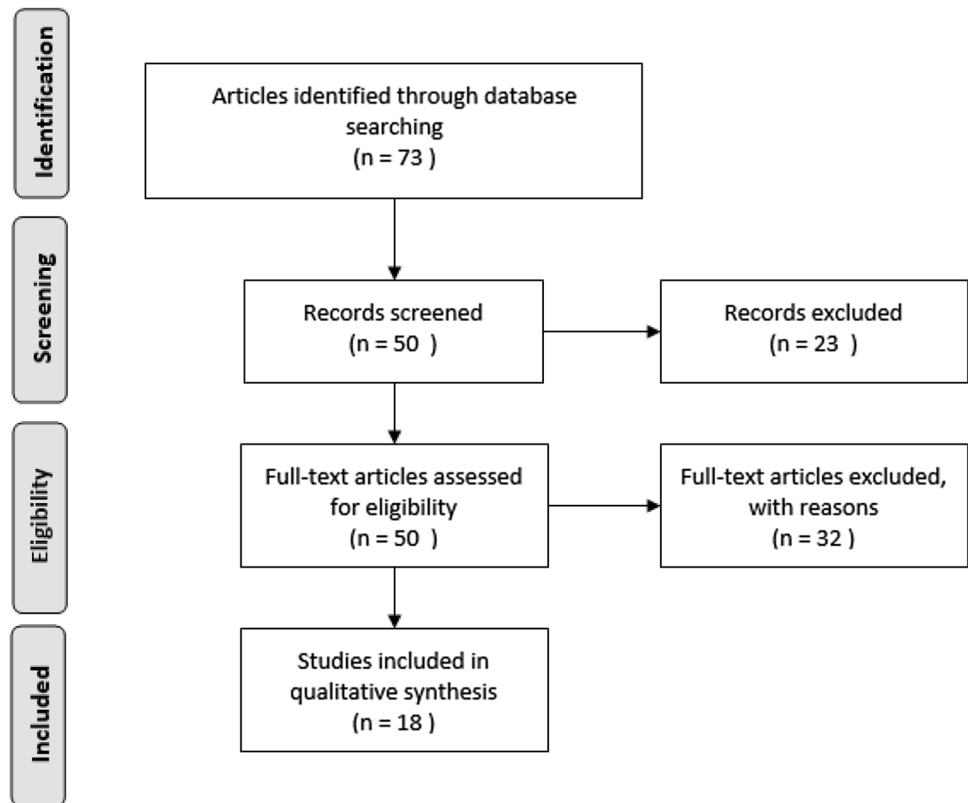
Connolly et al. (2012) conducted a metasynthesis of qualitative studies published between 2000 and 2010 relating to pregnant and parenting mothers with CPS contact. They identified risk, protective factors, and resiliencies that characterize the mothers in foster care. Seven themes were identified falling into these three categories. Themes associated with risks included (1) children and parenthood filling an emotional void, (2) inconsistent education (academic and sexual), (3) maternal adversities (financial needs, low social support, mental health issues, and instable housing), and (4) system distrust due to stigma (e.g. fear of judgement by social workers or being labeled “at risk” which leads to reluctance to ask for support and share needs). Support in the form of financial assistance and social connections was protective and led to improved outcomes for the mother. For example, mothers who felt that pregnancy and parenting was a positive experience had financial support and social support with a romantic partner, family member, or social worker. Two resiliency themes identified were described as (1) mothers who felt that motherhood was positive and stabilizing and (2) mothers who felt a sense of achievement and who were motivated to “do better” due to parenthood. These mothers assumed a sense of purpose, responsibility, and enjoyment after becoming parents, which led to fewer unhealthy behaviors and motivation to provide a better life for their children.

The current investigation builds upon the work of both Svoboda et al. (2012) and Connolly et al. (2012). While a number of studies were identified by Svoboda et al. (2012) and Connolly et al. (2012), many were based on small convenience samples. Both reviews noted the lack of knowledge about the incidence of pregnant and parenting youth and suggested that pregnancy prevention efforts would be more effective in the context of improved understanding about this at-risk population. The present analysis mirrors the methodology detailed by Svoboda et al. (2012) and summarizes newer research (published in 2011–2017) related to the risk, outcomes, and needs of pregnant and parenting mothers in foster care and their children. This review excludes research related to sexual health outcomes and sexual risk behaviors because it was covered recently by Winter, Brandon-Friedman, and Ely (2016). A review of the research allows for a deeper understanding regarding pregnant and parenting youth in care, important next steps for policy and practice, and directions for future work.

## Methods

Based on the criteria outlined by Svoboda et al. (2012), research articles were selected based on the following criteria: (1) findings were published by research entities, government agencies, or in a peer-reviewed journal (2) the article focused on, or included as a subset, young parents with CPS involvement, (3) reports were based on data collected in the United States. During the winter of 2017 two researchers employed four search methods to identify studies related to pregnant and parenting youth in foster care. First, electronic databases were searched to identify empirical articles. Searched databases included Google Scholar, PubMed, Online Contents, Picarta, ERIC, PsycINFO, and Web of Science. Search terms were selected based on the relevance to the population of pregnant/young mothers and included: “adolescent(s)” OR “young” OR “youth” OR “teen(s)” OR “teenage” AND “pregnancy” OR “mother(s)” OR “parent(s).” Words indicating foster care placement such as “foster”, “out-of-home care”, “child welfare”, “protection” and “child protective services” were added. Specific keywords such as “baby” and “child(ren)” were tested, as well. If search term(s) appeared in the title, abstract, full text or key words, then study was reviewed. Two researchers conducted the same searches of electronic databases to ensure all studies were identified.

Each time an article showed up as a match, the Google Scholar search tools “related articles” and “cited by” were used. Citations in relevant studies were then reviewed to determine if any referenced articles fit the three specific inclusion criteria described above. Building off the work by Svoboda et al. (2012), the current investigation extends their research and reviewed studies published in 2011 through 2017. If multiple studies used the same dataset, only the most relevant study was included in line with the methods outlined by Svoboda et al. (2012). In places where both studies using the same dataset were equally relevant and met the inclusion criteria the more recent study was chosen. From the 73 studies reviewed, 23 were dropped because they used the same dataset as a more relevant study, 32 were rejected because they did not meet each of the outlined criteria, and 18 methodologically diverse manuscripts were included in the present analysis. Figure 1 presents the screening process for the literature review as a flowchart based on work by the PRISMA Group (Moher, Liberati, Tetzlaff, & Altman, 2009). Table 1 includes the studies identified, a description of the population, and a summary of key findings relevant to pregnant and parenting youth in care. A description of each paper, common themes and identified solutions are detailed.

**Fig. 1** Flowchart of literature review screening process

## Results

Selected articles highlighted six main areas of interest related to pregnant and parenting youth in foster care: (1) documented incidents of early pregnancy, (2) risk factors associated with early pregnancy, (3) risks associated with early parenting, (4) identified needs of young parents, (5) identified resiliencies of young parents, and (6) outcomes associated with young childrearing. These areas are detailed in the following sections.

### Pregnancy Rates

Six articles using either interviews with youth, national surveys, or linked administrative data documented high rate of early pregnancy and parenthood among youth in care. Interviews with former foster youth suggest about half of these young women had been pregnant in early adulthood and a quarter had given birth. One hundred women and 115 men with a history in foster care were interviewed about pregnancy and parenthood (Combs, Begun, Rinehart, & Taussig, 2018). Almost half of the women reported having been pregnant and 33% of men reported getting someone pregnant by age 21. A quarter became parents. The CalYOUTH study followed 611 youth in foster care and interviewed the sample at age 19 (Courtney et al., 2016). Almost half of females had ever been pregnant by age 19 and over

a quarter reported giving birth. Sixteen percent had been pregnant twice. Oshima, Narendorf, and McMillen (2013) interviewed transition-aged youth in foster care and found by age 19, more than half of females had been pregnant and nearly a quarter of males had fathered a child. Zhan et al. (2017) examined younger youth and found lower rates of pregnancy. A cross sectional study was conducted by administering a survey to 113 adolescents (age 13–18) and found 9% of adolescents in foster family homes reported that they had ever been pregnant or gotten someone pregnant.

Studies using national databases to estimate the incidence of births were fairly consistent. An examination using data from the National Youth in Transition Database and Adoption and Foster Care Analysis and Reporting System found that among females emancipating from care 21% had given birth by age 19 (Shpiegel, Cascardi, & Dineen, 2017). Research in California based on linked birth and child welfare records has examined birth rates among foster youth. King and Van Wert (2017) identified all girls in California who spent time in foster care after their 10th birthday and also gave birth between 1999 and 2010. They found 18% had an adolescent birth. Putnam-Hornstein, Hammond, Eastman, McCroskey, and Webster (2016) built upon this study by following youth through age 21. They identified all California females who were in foster care at age 17 between 2003 and 2007 and found 19% had given birth at least once before age 19 and 35% had given birth before age 21. These

**Table 1** Summaries of studies

Study	Population/sample	Summary
Aparicio (2017)	18 in depth interviews with six women (ages 19–22) who gave birth while in foster care were assessed using interpretive phenomenological analysis	Females were age 15.5 at the first pregnancy, 16.6 at the first birth, 10.6 at placement, and experienced 6.8 placements. Women were asked about experiences aimed at preventing two-generation maltreatment and two themes were identified (1) treating children well/avoiding CPS and (2) relying on social support
Coleman-Cowger et al. (2011)	17,124 youth on substance abuse treatment programs were interviewed using the Global Appraisal of Individual Needs assessment tool. Of them, 366 had been in foster care in the past year	The youth who had been in foster care differed in regards to gender, race/ethnicity, level of substance abuse care, weekly drug use, comorbidity, past victimization, and pregnancy status. Externalizing disorder symptoms, substance use, and victimization did not predict past year pregnancy within the foster care group. Adolescents reporting higher internal mental distress (IMD) were more likely to have been/gotten someone pregnant in the past
Combs et al. (2018)	215 young adults (ages 18–22) with a history of foster care (100 were women). Eight cohorts of youth were sampled who were enrolled in the Fostering Healthy Futures (FHF) study between 2002 and 2009 during preadolescence	49% of the women became pregnant and 33% of men reported getting someone pregnant by age 21. A quarter became parents and parenthood was associated with lower educational attainment, less employment (women only), not having a checking or savings account, and homelessness. Hispanic/Latina and American Indian women were more likely to experience parenthood than other racial/ethnic groups. Fathers were more likely than mothers to be employed
Courtney et al. (2012)	The data for this study come from the Midwest Evaluation of the Adult Functioning, a longitudinal study of former foster youth in the Midwest (Midwest Study). Baseline interviews occurred in 2002–2003 of young people when they were 17/18 years old and in foster care (n = 732). Follow-up interviews were completed at ages 19 (N = 603), 21 (N = 591), and 23 or 24 (N = 602). These data used 584 of the 602 youth interviewed at 23 and 24 who had complete data. Latent Class Analysis was used to identifying subgroups of former foster youth at age 23 and 24	Over half the “Accelerated adults” subgroup were parents. They had a fairly stable living situation and were faring well across indicators of education, employment, social support, and mental health, yet a third had been homeless or relied on food supports. “Struggling parents” were described as a subgroup that was largely parents (98%) who had low educational attainment and employment, used government benefits, had the lowest level of social support and high institutionalization. “Troubled and troubling” group was mostly male, with histories of housing instability, mental illness, substance abuse issues, and incarceration. 48% of these parents had nonresidential children
Courtney et al. (2016)	CalYOUTH followed 611 youth in foster care through age 21 using in-person interviews and conducted online surveys of California child welfare workers about youth and services. 121 of the youth reported they were parents (19.8)	Almost half of the females had been pregnant by 19 and a quarter gave birth. 16% had been pregnant twice. 2% were married to the child’s other parent at birth and two-thirds wanted to marry the partner. Nearly a third started prenatal care after the first trimester with 13% who did not get any prenatal care. About a third said they wanted to become pregnant. 81% of youth reported feeling “very prepared” to meet parenting goals. Youth reported the highest levels of satisfaction with parenting programs among all life skills services
Dworsky (2015)	Illinois state administrative records were used to identify children born to youth in foster care between 2000 and 2008 (n = 2487) and documented investigated child maltreatment reports and placements in out of home care	39% of the children were investigated by CPS, 17% had a substantiated report, and 11% were placed in out of home care before age 5. Nearly 1/3 of children were investigated while their parent was in care and 14% of the children whose parent had exited care were investigated after the parent’s exit

Table 1 (continued)

Study	Population/sample	Summary
Dworsky & Gitlow (2017)	Telephone interviews were conducted with parents who emancipated from foster care in 2014 and 2015 to assess: education, employment, housing, financial management, benefit receipt, support systems, and children (n = 45)	Low rates of employment/unstable work histories were common among parents in care. Being younger at first birth was associated with lower earnings. Runaway histories and dual system involvement (not placement instability) were associated with poorer employment outcomes. Parents identified factors that aided in the transition from care: the opportunity to live independently, having support or advice, and learning how to budget
King & Van Wert (2017)	All girls in California who spent time in foster care after their 10th birthday (N = 30,339) who gave birth between 1999 and 2010. About 18% (n = 5567) had an adolescent birth (ages 12–19) in this time frame	Girls who entered care between 13 and 16 years, girls with Latina, Black or Native American race/ethnicity, and those with a history of running away from care were at greatest risk for pregnancy. Placement in a nonrelative foster home or congregate care predicted higher birth rates compared with girls living with kin, a guardian, or in another arrangement
Leve et al. (2013)	166 girls were recruited to participate in the randomized control trial. The population included girls ages 13–17 years, who were living in out-of-home care due to delinquency, and not currently pregnant	The girls were assigned to Multidimensional Treatment Foster Care (MTFC) or relative to group care (GC) and followed into young adulthood. A pregnancy within the first 2 years after placement in either MTFC or GC was related to drug use, a new pregnancy that resulted in a miscarriage, and involvement in the child welfare system (as a parent)
Lieberman et al. (2015)	Pregnant and parenting teens in foster care (18 and younger) were examined. 130 girls and young women living in a residential program based Inwood House Theory of Change (IHTOC) and a comparison group (n = 103)	The program was evaluated using pretest, posttest, and face to face interviews of pregnant teens and was associated with improved job skills and resources, parenting empathy, receipt of birth control, and relationships with supportive adults, peers, and family members
Milbrook (2012)	100 female, who were all 21 years of age, living in Illinois. They had at least one child prior to the age of 20 and never been married. Participants were selected from a listing of women who aged out of the Teen Parenting Service Network	42 had one child and 58 had at least two children at the age of 21. The average age at birth of first child was 18. 8 had a documented DSM-IV diagnosis, 90 lived in placements approved by their case management agencies, and 41 had either enrolled or completed in a High School program while 59 were classified as dropouts
Narendorf et al. (2013)	28 parents between ages 18 and 25 years with a mood disorder diagnosis and service system use prior to age 18. More than half of participants had been involved in the child welfare system (n = 17) and all youth had been involved with multiple systems of care as children	Emotional difficulties presented challenges for parenting and parenting presented challenges for managing the disorder. Parents also described experiences using mental health services as parents. Parenthood was cited as a source of motivation to manage the disorder
Oshima et al. (2013)	325 older youth in foster care at age 17 in Missouri were interviewed at age 17 and 19	For females, early sexual intercourse and history of delinquency were associated with pregnancy risk. Use of birth controls was not protective against pregnancy (which was largely condoms). By age 19, more than half of females had been pregnant and nearly a quarter of males had fathered a child
Putnam-Hornstein et al. (2016)	Linked child protection and birth records were linked to identify all adolescent girls in foster care at age 17 years in California (2003–2007, N = 20,222)	11% of girls in care at age 17 had a first birth before age 18. 19% before age 19, 28% before age 20, and 35% before age 21. The rates varied across county and the mother's race/ethnicity
Radey et al. (2016)	Group interviews with parents (n = 15) who were aging out of care and (separately) service providers (n = 14) in Florida	Parents face risk factors but they are motivated to take care of their children and prevent next-generation maltreatment. Providers were concerned about the parent's difficult living environments, economic dependency on public assistance, and lack of positive parenting role models. Three areas were identified as essential for parent success: basic needs, social support, and effective parenting skills

**Table 1** (continued)

Study	Population/sample	Summary
Schelbe & Geiger (2017)	33 parents aging out of care were interviewed about parenting experiences (21 mothers, 12 fathers, ages 17 to 23 years). Parents were recruited from local agencies who worked with the aging out population and purposely sampled	This ethnographic study observed parents. Six themes were identified: "(1) balancing the joys and challenges of parenthood; (2) limited parenting skills; (3) wanting a better life for their children; (4) limited resources and support; (5) threat of system involvement; and (6) children as a source of motivation." p. 54
Shpiegel et al. (2017)	National data from the National Youth in Transition Database and Adoption and Foster Care Analysis and Reporting System on females in foster care at age 17 in 2011 (N = 3474). Females were followed through 19	21% of females gave birth by 19. Increased risk of birth was associated with race/ethnicity, placement with relatives, runaway history, early emancipation from care, and prior incarceration. A birth before age 17 was the greatest predictor of birth between 17 and 19
Zhan et al. (2017)	A random sample of children who had been placed in foster family homes were asked to complete a self-administered questionnaire related to risk behaviors (sexual behavior, running away and pregnancy involvement). 147 adolescents took the supplemental survey and were included in the analysis	9% adolescents in foster family homes reported that they had ever been pregnant or gotten someone pregnant. High school students in foster family homes were significantly more likely to have ever been pregnant or gotten someone pregnant (11% vs. 2%, $p=0.01$ ). A history of running away from a foster home was associated with pregnancy involvement

findings were slightly lower than what was reported by youth in interviews.

### Risk Factors Associated with Pregnancy and Childbirth

Risks associated with pregnancy and childbirth among youth in care were examined in 6 of the 18 studies. King and Van Wert (2017) found that girls with Latina, Black, or Native American race/ethnicity, and those with a history of running away from care were at greatest risk for pregnancy. Placement in a nonrelative foster home or congregate care predicted higher birth rates compared with girls living with kin, a guardian, or in another arrangement. Other studies found a runaway history (Shpiegel et al., 2017; Zhan et al., 2017) and being a person of color (Combs et al., 2018; Shpiegel et al., 2017) were associated with both pregnancy or childbirth. In contrast to the King and Van Wert (2017)'s study, Shpiegel et al. (2017) found placement in a relative foster home was associated with an increased risk of childbirth in comparison to non-relative foster homes, as were emancipation from foster care and a history of incarceration. Oshima et al. (2013) examined factors associated with pregnancy risk among youth transitioning out of foster care and found that pregnancy risk for all youth was high, regardless of identifiable risk factors. For females, early sexual intercourse and history of delinquency were associated with increased risk. Coleman-Cowger et al. (2011) used pooled data from 13 adolescent and adult substance abuse treatment programs offered across the United States ( $n = 12,124$ ). Among these youth, 366 had been in foster care in the past year. Youth were asked if they had ever been or gotten someone pregnant. Results showed that youth who had been in care in the past year were at increased risk for becoming/getting someone pregnant and higher internal mental distress was associated with past pregnancy. Milbrook (2012) hypothesized that a lack of stable adult relationships presented as a risk for repeat pregnancies among teen mothers. Results indicated a correlation between teen mothers that had a subsequent teen pregnancy and greater instability in placements, schools, and case managers. Findings from a study by Leve, Kerr, and Harold (2013) suggest interventions can influence pregnancy rates among girls in care. They conducted a randomized control trial to compare the effects of Multidimensional Treatment Foster Care (MTFC) relative to group care (GC) on adolescent pregnancy and found that significantly fewer pregnancies were reported in the 2-year follow-up for girls in the treatment group.

### Risks Associated with Early Parenthood

Three studies addressed the risks associated with becoming a parent at an early age for youth who have current or

past involvement with CPS. Combs et al. (2018) found that early parenthood for adolescents who had a history in foster care was associated with lower educational attainment, less employment (for women only), homelessness, and decreased likelihood to having a checking or savings account. Dworsky and Gitlow (2017) interviewed 45 parents who had recently emancipated from care and found parents were not immune to the generally poor outcomes observed for youth after exiting care and found parents were often unemployed and had unstable work histories. There was a relationship between poor employment outcomes and younger age at first birth, African-American ethnicity, runaway history, and past criminal justice system involvement. Courtney, Hook, and Lee (2012) conducted a latent class analysis of former foster youth and one class emerged as “Struggling parents.” They stated, “We refer to this group as Struggling Parents because it appears that their experience is dominated by their parenting, often under very difficult circumstances.” (p. 414). This subgroup was largely parents (98%) who had low educational attainment and employment, used government benefits, had the lowest level of social support and high institutionalization.

### Identified Needs of Parents

Three studies used individual interviews to identify the needs of these young parents. Schelbe and Geiger (2017) and Radey, Schelbe, McWey, Holtrop, and Canto (2016) interviewed parents aging out of care and found they lacked financial, emotional, social, and parenting support. Parents in both studies reported they often relied on welfare, experienced unemployment, had unstable housing, and needed reliable and safe child care. Even parents who worked struggled to purchase basic child necessities. They faced additional emotional challenges in comparison to older mothers or mothers not in care. Of great concern was the lack of social support. Many mothers are single parents who did not have help from the baby’s father (Schelbe & Geiger, 2017; Radey et al., 2016) and youth reported having conflict with the child’s other parent (Schelbe & Geiger, 2017). Parents transitioning out of care had limited parenting skills and knowledge about child development (Schelbe & Geiger, 2017; Radey et al., 2016) and many felt unprepared to be parents (Schelbe & Geiger, 2017).

Narendorf, Munson, and Levingston (2013) identified a positive and negative bidirectional relationship between parenting and mental health for former foster youth. Parents experienced increased symptoms because they stopped medication during pregnancy, had postpartum depression, and were frequently stressed by their child’s needs. However, parents were also motivated to take psychotropic medication so they could parent better and found that interacting with their children made them happy. These parents found that

access to mental health services helped them connect with parenting supports. While these parents identified barriers to services, such as having time and hours of availability, but they reported that they became a better parent because of the mental health counseling.

### Identified Parent Resiliencies

Despite articles overwhelmingly focusing on the negative aspects of early parenting among foster youth, interviews from four articles suggest that young mothers are committed to being good parents and may benefit from the transition into parenthood (Aparicio, 2017; Radey et al., 2016; Schelbe & Geiger, 2017). For example, parents hoped their children would have a better life than they had (Schelbe & Geiger, 2017), reported a desire to be a good role model (Schelbe & Geiger, 2017), and expressed the need for improving parenting skills (Radey et al., 2016). Schelbe and Geiger (2017) found youth were proud to be parents, even when the pregnancy was unintended. Parents felt more responsible and were inspired to continue education, get off public assistance, and move to safer neighborhoods. They expressed enjoyment and love for their children and parenthood and reported that their children were a source of happiness. Parents expressed fear of CPS involvement and a desire to end the cycle of maltreatment (Aparicio, 2017; Radey et al., 2016; Schelbe & Geiger, 2017).

### Child Outcomes

Although children of minor youth who experienced foster care may be at increased risk for maltreatment and next generation child welfare involvement, little research focuses on these children (Dworsky, 2015; Putnam-Hornstein, Cederbaum, King, Eastman, & Trickett, 2015). This review identified four articles that specifically addressed the children of young parents who experienced foster care. The CaLYOUTH study found that among parents interviewed who were 19-years-old former (and sometimes current) foster youth, 89% of young women and 43% of young men lived with their children at the time of the interview (Courtney et al., 2016). More than a third of females reported living with the other parent. Mothers who did not live with their child reported seeing the child a few times a month. Approximately 40% of children who were not living with their mothers were living with adoptive or foster parents. Fifteen percent of children were wards of dependency court. Similarly, Combs et al. (2018) found that 84% of mothers and 45% of fathers with a foster care history lived with their children full or part time. Using Illinois state administrative data, Dworsky (2015) documented CPS involvement among children and found 39% of the children were investigated by CPS, 17% had a substantiated report and 11% were placed in

out of home care before age 5. Nearly one-third of children were investigated while their parent was in care, and 14% of the children whose parent had exited care were investigated after the parent's exit. Factors associated with increased risk for two-generation CPS involvement include younger maternal age at birth, parental placement instability, and shorter stays in care. Leve et al. (2013) also examined child welfare involvement among parents, comparing girls who were given Multidimensional Treatment Foster Care (MTFC) to girls placed in group care and did not find a significant difference in the risk of two-generation involvement. However, the treatment was associated with delayed pregnancy.

## Discussion

There has been significantly more research on pregnant and parenting youth in foster care since Svoboda et al. (2012) conducted their review of the literature. The present literature review was modeled after Svoboda et al. (2012), who identified 16 relevant studies between 1989 and 2010. The current study identified 18 relevant studies published between 2011 and 2017. Overall, these studies found pregnancy was common among girls in care, early parenthood was associated with negative outcomes for mother and child, and families were in need of a variety of supportive services. Key solutions and next steps are described and divided into four main areas: (1) the need to reduce early, unintended pregnancies; (2) the need to improve circumstances for young parents in care; (3) future research; (4) and possible solutions.

First, studies emphasized the importance of prevention and suggested reducing the number of early, unintended pregnancies as a way of improving outcomes for both mother and child (Dworsky, 2015; Leve et al., 2013; Schelbe & Geiger, 2017). There is consensus that sexual health and education efforts, as well as access to contraceptives, are needed for all youth in care, although there is no consensus about the most critical period for delivery. Oshima et al. (2013) underscored the need for sexual health education and prevention efforts for all youth transitioning out of care, highlighting ages 17–19 as a key period for pregnancy prevention. Putnam-Hornstein et al. (2016) suggest age 18 is a critical window for service delivery due to the high rate of births between ages 18 and 21 among transition-aged youth. King and Van Wert (2017) suggest that social workers and health care professionals need to talk to youth in care about sexual and reproductive health early. Their findings suggest that girls who enter care between ages 13 and 16 should be targeted because age of entry into care was a significant predictor of early childbirth. They also found that pregnancy commonly occurs shortly after girls enter care, which suggests intensive programming may reduce the risk

of adolescent births among teen girls who recently entered care. Girls living in nonrelative and congregate homes were at increased risk of pregnancy, suggesting these placements could be targeted for training and intervention. Shpiegel et al. (2017) proposed that sexual health and pregnancy prevention programs should be used to target youth who already have children in order to prevent rapid, repeat births. These authors also found adolescents with prior criminal involvement who were placed with biological families are in need of targeted supports. Combs et al. (2018) voice the need to reach all males and females in foster care because risk of early pregnancy is universally common.

Second, once youth become parents, studies highlight the need to develop effective interventions for parents in care and their children. Radey et al. (2016) identified three areas for parent success: basic needs, social support, and effective parenting skills. A number of studies support this claim. Schelbe and Geiger (2017) found parents in care had limited resources and that basic items such as cribs, clothes, and car seats were needed to provide adequate care. Dworsky and Gitlow (2017) highlighted the importance of parenting youth having access to child care in order to be successfully employed. Parents identified needs such as housing and health insurance and reported that they had benefitted from services related to independent living skills and budgeting (Dworsky & Gitlow, 2017). The interviews with parents in three studies, Aparicio (2017), Radey et al. (2016), and Schelbe and Geiger (2017), highlighted the lack of social support for mothers aging out of care. The mothers, many of whom were single parents, reported a lack of support of even one caring adult. Radey et al. (2016) found that both parents and providers expressed the value of peer and mentoring support. Similarly, Schelbe and Geiger (2017) highlighted the need for parents to learn to develop and sustain relationships, particularly with caring adults who can support parenting efforts. Among all parents identified by the CalYOUTH study, only 2% were married to the child's other parent at birth (Courtney et al., 2016). Schelbe and Geiger (2017) found that parents aging out of care lack knowledge about child development and parenting skills and are in need of programs that will provide them with skills needed. They emphasize that parents need specific knowledge about child development, appropriate expectations, non-physical discipline, and empathy.

Studies also flagged the need for substance abuse (Aparicio, Pecukonis, & O'Neale, 2015; Coleman-Cowger et al., 2011) and mental health treatment (Aparicio et al., 2015; Narendorf et al., 2013). Parents reported that they struggled with substance abuse issues, which negatively impacted parenting. Aparicio (2017) highlighted the need to discuss possible substance abuse issues with parents. Mental health concerns are common among youth in care (Eastman, Putnam-Hornstein, Magruder, Mitchell, &



Courtney, 2017) and mental health services may improve the mother's ability to successfully parent (Narendorf et al., 2013). Narendorf et al. (2013) highlighted the need to provide mental health interventions for parents because investment in mental health services may improve the life course trajectories for both mothers and child. Barriers such as access to mental health services and concerns about stigma must also be addressed to improve outcomes for these parents and children (Aparicio et al., 2015).

Due to the stressors and circumstances for parenting youth in care, there was a general agreement that coordinated service delivery may be necessary to address their specific needs (Courtney et al., 2016; Dworsky & Gitlow, 2017; Radey et al., 2016). Radey et al. (2016) highlighted the importance of being in tune with the specific concerns of parents aging out of care in order to be effective in meeting their needs. The study shows that these young parents are primarily concerned with meeting basic needs, and tend to deal with crises as they arise. The authors suggest that these parents would benefit from coordinated financial and supportive services to both address basic needs and prepare for crises. Courtney et al. (2016) and Dworsky and Gitlow (2017) suggest that in order to improve outcomes child welfare agencies should coordinate with state and local agencies in delivering services. In addition, Schelbe and Geiger (2017) noted that in order to increase the likelihood of service usage parents need to be taught to navigate service delivery systems. If parents have supports, the results may yield two-generation benefits.

Third, studies highlighted the lack of knowledge about pregnant and parenting youth in care and their children and noted the importance of improving the knowledge base for this vulnerable population in key areas (Aparicio et al., 2015; Combs et al., 2018; Radey et al., 2016; Schelbe & Geiger, 2017). Shpiegel et al. (2017) called for an examination into the cause of rapid repeat births, given that it occurs frequently among mothers in care. Authors also suggested that an evaluation of access to long term birth control could inform practitioners. Zhan et al. (2017) suggested future research should compare the effectiveness of different birth control methods. Combs et al. (2018) and Radey et al. (2016) highlighted the lack and importance of research related to fathers. Radey et al. (2016) identified a need to understand how foster care placements and services are related to parenting. Schelbe and Geiger (2017) underscored the need to identify risk and protective factors for parents in foster care and those aging out. Combs et al. (2018) described the need to conduct longitudinal work to identify risk factors associated with parenting outcomes and long-term trajectories. Aparicio (2017) and Radey et al. (2016) expressed the need for a better understanding of the mechanism through which two-generation CPS involvement occurs.

Importantly, studies highlighted the need to evaluate evidenced based interventions that target pregnancy prevention and parenting supports for youth and young parents in foster care (Combs et al., 2018; Dworsky, 2015; Narendorf et al., 2013, Schelbe & Geiger, 2017). Specifically, Combs et al. (2018) noted the need to examine strategies child welfare agencies use to address early pregnancy and parenting. Narendorf et al. (2013) highlighted the importance of identifying programs that are successful for parents with mental health needs. Schelbe and Geiger (2017) flagged the need for more knowledge about the parenting practices of youth aging out of care and the development of interventions that target parenting skills for this population. Aparicio (2017) recommended a study related to patterns of community support that effectively improve the ability to parent.

Dworsky (2015) noted that future research should also examine the effect of changes in child welfare policy and practice on the risk of child maltreatment. A preventative approach can be one of the most effective ways to minimize the maltreatment risk of children born to young parents who had been in foster care. For example, many states now offer non-minor foster youth the option to remain in foster care until their 21st birthday. This extension of foster care has been highlighted as a prevention policy in need of further examination in relation to pregnant and parenting youth in care. Shpiegel et al. (2017) suggest an examination of the risk of childbirth is needed among girls who remain in extended foster care. Putnam-Hornstein et al. (2016) indicated it is necessary to determine if youth differentially select to remain in extended care given that extended care can now be offered during a critical birth window. Furthermore, the fact that non-minor youth are opting to remain in care in many states provides an opportunity for prevention and intervention as well as an assessment of the effect of the change.

Fourth, a number of programs that may delay births and improve parenting supports were detailed. Making Proud Choices! is an evidence-based sex education curriculum for youth in foster care (Dworsky, 2015) and the Multidimensional Treatment Foster Care (MTFC) program reduces pregnancies in this high-risk population (Leve et al., 2013). The Illinois Department of Children and Family Services provides coordinated services for parents in care by conducting new birth assessments by observing parent-child interactions, providing parenting education, identifying unmet needs and safety concerns, connecting parents with community resources, and assessing risk for child abuse or neglect (Dworsky, 2015). Similarly, the Los Angeles County Department of Children and Family Services provides a voluntary Pregnant and Parenting Teen (PPT) conference to pregnant and parenting youth under their care. These PPT conferences use a team-based approach to identify needs and connects parents with supportive services and resources

(i.e. early home visiting programs) (Dworsky, 2015). Radey et al. (2016) suggested The Incredible Years curriculum as a possible fit for parents in care because it utilizes peer based relationships, modeling, and evidence supported parenting techniques which addresses parents' needs for peer mentors, positive parenting skills, and social support. Inwood House Theory of Change (IHTOC) is an intervention designed to cover the spectrum of services needed including pregnancy prevention, prenatal support and parenting services. An examination by Lieberman, Bryant, and Boyce (2015) found that participation in IHTOC was associated with an increase in parenting empathy, birth control utilization, job skills, and positive relationships. Still, services designed specifically for this population are in their infancy. Lieberman et al. (2015) suggest that interventions must be developmentally appropriate, theory driven, and focus on reducing unintended pregnancies, improving parental success, and decreasing two-generation CPS involvement.

## Conclusion

These studies demonstrate a need for pregnancy prevention services, supports for parents, and future research that focuses on identifying strategies to improve two-generation outcomes. The majority of studies focused on pregnancy and the factors associated with increased risk of early births among girls in care. These studies provide a strong case for the need for leadership in child welfare to take on sexual and reproductive health interventions to delay pregnancies among girls in care. Studies focusing on parents in care detailed the need for comprehensive supportive services for parents that are tailored to address their unique parenting experiences and highlighted the resilience of these parents. Most recently, Holtrop et al. (2018) published the first study about the process of adapting an evidenced-based parenting intervention for parents in care. The study highlights the difficulties with implementation and the need for continued efforts to develop programs that fit the needs of these parents. Though limited, literature has examined parents in care, however, to date very little is known about their children. Interviews with parents showed that parents were aware that their children were at increased risk of CPS involvement and were dedicated to breaking the cycle (Radey et al., 2016). There is a need for information that can demonstrate the necessity for improved programs and policies related to pregnant and parenting youth in care and their children. The momentum continues to build.

**Acknowledgements** The Doris Duke Fellowship for the Promotion of Child Well-Being provided dissertation support and funding for 2 years, without which this paper could not have been completed. The authors would like to thank Deb Daro for investments in generating new knowledge for children at risk for maltreatment.

**Funding** This study was funded by the Doris Duke Fellowship for the Promotion of Child Well Being.

## Compliance with Ethical Standards

**Conflict of interest** All authors declare that they have no conflict of interest.

**Ethical Approval** This article does not contain any studies with human participants or animals performed by any of the authors.

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