# Perceived Benefits and Proposed Solutions for Teen Pregnancy: Qualitative Interviews With Youth Care Workers

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The purpose of this article is to examine youth care workers' perceptions of the specific and unique sexual health needs of youth at risk for foster care. Semistructured interviews were conducted with youth care workers (N=10) at a shelter for youth in or at risk for foster care. Youth care workers perceive that youth have unique experiences and needs related to sexual health programming and pregnancy prevention. Reflecting a great deal of family dysfunction, 3 themes emerged that revealed perceived benefits of teen pregnancy: youths' effort to prove themselves as adults, opportunity to secure their relationship with a partner, and desire to create an emotional connection with a baby. Lack of knowledge and accumulation of risk factors were viewed as most problematic. Current pregnancy prevention programs assume teen pregnancies are unwanted and emphasize the costs of sexual risk taking. Current findings suggest that sexual health programming for youth in or at risk for foster care should account for 3 perceived benefits of teen pregnancy. New opportunities for improving the reach and effectiveness of intervention for youth in or at risk for foster care are discussed.

early 400,000 children live in foster care (Child Welfare Information Gateway, 2013). Involvement in foster care is associated with increased vulnerability for a variety of problems regarding employment and financial stability; family, peer, and romantic relationships; substance abuse, delinquency, and physical and mental health diagnoses (Courtney et al., 2005; Damnjanovic, Lakic, Stevanovic, & Jovanovic, 2011; Mc-Millen et al., 2005; Tarren-Sweeney, 2008; Thompson & Auslander, 2011; Woods, Farineau, & McWey, 2013). This study explores the perspectives of youth care workers on teenage pregnancy among adolescents involved in child welfare. These youth have been removed from their homes and are residing in an emergency shelter, pending reunification with biological family, or a more permanent placement (relative care, foster home, etc.). Youth are generally removed from their home because of reports of abuse or neglect. Special attention is given to the perceived costs and benefits of teenage pregnancy for these vulnerable youth.

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### **Costs and Consequences of Teen Parenting**

Consequences of teen parenting include social, economic, school, and emotional problems (Hofferth, Reid, & Mott, 2001; Sarri & Phillips, 2004) for the teenager. Teen parenting is negatively related to academic achievement (Fergusson & Woodward, 2000; Manlove, 1998). Teen moms complete 1.9 to 2.2 fewer years of school than women who have children after age 29 (Hofferth et al., 2001). In the state of Illinois, nearly half of teen moms complete high school or obtain their GED but that number drops to 16% among teen moms in foster care, with GPAs ranging from 1.25 to 1.79 (Dworsky & DeCoursey, 2009). Only 64% of teen moms graduate within 2 years of their scheduled graduation compared to 94% of their peers (General Accounting Office, 1998). Less school results in more job difficulties and more public aid: Nearly 80% of teen moms eventually receive public assistance (Finkelstein, Finkelstein, Christie, Roden, & Shelton, 1982; Hoffman, 2006; Smith, Gilmer, Salge, Dickerson, & Wilson, 2013). For youth in foster care in Illinois, having a second child further diminished opportunities; with each additional child decreasing the odds of obtaining a GED or high school diploma by half (Dworsky & DeCoursey, 2009). Mental health is also affected, with teen moms experiencing significant distress, particularly depression (Patel & Sen, 2012), including postpartum depression rates that are higher compared to adult moms (Barnet, Joffe, Duggan, Wilson, & Repke, 1996; Deal & Holt, 1998; Figueiredo, Pacheco, & Costa, 2007; Schmidt, Wiemann, Rickert, & Smith, 2006).

As with teen moms, teen dads complete fewer years of school and have fewer job opportunities compared to their childless peers (Bunting & McAuley, 2004). They often come from low-income

communities, making it difficult for them to contribute financially to supporting their child (Coley & Chase-Lansdale, 1998). They experience greater psychological and emotional difficulties and high rates of delinquent behavior (Fagot, Pears, Capaldi, Crosby, & Leve, 1998; Stouthamer-Loeber & Wei, 1998; Wei, Loeber, & Stouthamer-Loeber, 2002).

Infants born to teen parents are at similarly elevated risk for adjustment difficulties that begin even before they are born. First, compared to women who have children in their twenties, teen moms are less likely to access prenatal care or they initiate care later in pregnancy (Harris & Allgood, 2009). Their newborns are more likely to be born premature or low birth weight, leading to delays, health problems (Bassuk et al., 1996; Blum, Beuhring, & Rinehart, 2000; Manlove, 1998; Maynard, 1997; McFarlane, Parker, & Soeken, 1996) and increased mortality (Babson & Clarke, 1983; MacDorman, 1998). Infants are more likely to be abused (Connelly & Straus, 1992; Hardy, Welcher, Stanley, & Dallas, 1978; Hoffman, 2006; Levine, Pollack, & Comfort, 2001; Rafferty, Griffin, & Lodise, 2011; Terry-Humen, Manlove, & Moore, 2005) and arrive in state care, especially if the mom herself is placed in foster care (10% vs. 2%, Dworsky & DeCoursey, 2009). Compared to their peers, children of teen moms have less supportive or stimulating home environments, lower cognitive development, more behavioral problems, and are more likely to drop out of school (Bennett & Assefi, 2005; Hotz, McElroy, & Sanders, 2005; McFarlane et al., 1996). Boys born to teen parents are more likely to be incarcerated, and girls born to teen parents are more likely to become teen moms too (Bennett & Assefi, 2005).

Finally, the economic costs of teen parenting are estimated to be about 9,4 billion dollars. (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2013). Factors include lost income (and lost income tax) because of decreased opportunities, increased health care costs, and costs associated with public assistance (food stamps, housing), child welfare including foster care, and incarceration of children of teen moms (Hotz et al., 2005). These estimates are conservative, reflecting costs reliably linked to teen parenting versus associated risks, such as poverty.

### Disproportionate Needs Among Youth in Foster Care

Adolescence is a developmental period in which youth are more likely to engage in high-risk behaviors (Ellis et al., 2012). Youth who experience poor family functioning, low parental attachment, or who have experienced hardship (such as abuse), are even more likely to engage in risky behaviors (Sousa et al., 2011). Youth in foster care or at risk for foster care are among the most vulnerable, by nature of their histories of abuse, displacement from their homes, and low family functioning, including abusive or neglectful parenting, parental abandonment, parental substance abuse, and parental mental illness (Kools, Paul, Jones, Monasterio, & Norbeck, 2013). Youth in care are more likely to come from lowincome, single-parent families with unemployed parents (Burns et al., 2004). They generally have 2.5 to 3.5 times higher rates of externalizing problems (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Dubowitz et al., 1994; Jones, 2011; Pilowsky & Wu, 2006; Tarren-Sweeney, 2008) and internalizing problems, including higher likelihood of attempting suicide (Tarren-Sweeney, 2008) compared to a national sample of adolescents

(Pilowsky & Wu, 2006). They are more likely to abuse substances (Baker, Gibbs, Sinclair, & Wilson, 2005; Tarren-Sweeney, 2008) and have problematic sexualized behavior (Baker et al., 2005). Furthermore, youth in foster care have elevated rates of teenage pregnancy compared to youth in a national sample (Dworsky & Courtney, 2010; Harris et al., 2009).

Approximately 30% of youth in foster care report engaging in risky sexual behaviors (Love, McIntosh, Rosst, & Tertzakian, 2005). As young adults, they continue to report rates of risky sexual behavior higher than a nationally representative sample of their peers not involved in foster care (Harris et al., 2009). Young adults formerly in foster care were more likely to ever have had a sexual encounter, to have had a sexual partner with an STD, and to have been paid to have sex. (Courtney et al., 2007, 2005; Courtney, Dworsky, Lee, & Raap, 2009). The risk for transactional sex (being paid for sex) was higher for youth who had experienced childhood sexual abuse (Ahrens, Katon, McCarty, Richardson, & Courtney, 2012). Youth formerly in foster care also were more likely to contract a sexually transmitted infection (Ahrens et al., 2010) and to report inconsistent condom use (Ahrens, McCarty, Simoni, Dworsky, & Courtney, 2013) than a comparison sample.

Despite progress in reducing teen pregnancy nationwide (Hamilton, Mathews, & Ventura, 2013), pregnancy rates among foster care girls remain high, more than double those of their peers (Becker & Barth, 2000; Dworsky & Courtney, 2010; Leonard, Fantroy, & Laffert, 2013; Polit, Morton, & White, 1989). Among girls in foster care, 30% have been pregnant by age 17 and nearly half (48%) have been pregnant by age 19 (Dworsky & Courtney, 2010) compared to 20% and 13.5% of teens in a national sample (Dworsky & Courtney, 2010; Harris & Allgood, 2009). Repeat pregnancies are also disproportionate: 23% and 46% of foster care girls report an additional pregnancy by ages 17 and 19, respectively, compared to 17% and 34% in a national sample (Dworsky & Courtney, 2010). There are few data about teen dads in general, and even less about teen boys in foster care who become fathers (Svoboda, Shaw, Barth, & Bright, 2012). However, 50% of 21year-old males aging out of foster care report they are responsible for a pregnancy, compared to 19% of their peers not involved in foster care (Courtney et al., 2007).

The negative consequences directly associated with parenting responsibilities during adolescence in general are significant. Although longitudinal data specific to teen parents from foster care are not available, we expect that negative consequences would be exacerbated for these youth whose lack of family support and educational underachievement already place them at disproportionate risk for poor outcomes.

### Current Efforts in Sexual Health and Pregnancy Prevention Programming

Several sexual health and pregnancy prevention programs have been rigorously examined and widely implemented (e.g., DiClemente et al., 2004; Jemmott, Jemmott, & Fong, 1998). Most programs deliver information on teen sexual health, including psychoeducation about abstinence, STDs, contraception, relationships, and consequences of risky sexual behavior. Common to most is an emphasis on skills building via modeling, role plays, discussions, and videos (Boustani et al., 2014; Kirby & Laris, 2009) on how to protect oneself, specifically teaching youth as-

sertiveness, refusal skills, and proper use of condoms. Some programs target specific populations (e.g., gender, ethnic group, or sexual orientation) with certain features of the curriculum designed to align with unique cultural norms or respond to specific needs. For example, SiHLE (DiClemente et al., 2004) focuses on African American females, using activities focusing on ethnic and gender pride, with examples of prominent African American females discussed in the context of intervention. Cuidate! (Jemmott et al., 1998) focuses on Latino teenagers, and thus addresses cultural beliefs related to sexual risk behaviors that are common among many Latino subgroups, such as familialismo (the important role of family, including extended family) and gender role expectations, including machismo.

Evidence-based sexual health and pregnancy prevention programs share several features common to their development, content, and implementation. First, program developers invited significant involvement from community stakeholders (e.g., nurses, providers, families) to design a needs assessment that in turn informed content and activities consistent with community values (Kirby, Laris, & Rolleri, 2006). Second, content prioritizes prevention of HIV/STDs and/or pregnancy by focusing on specific empirically based predictors, including psychosocial risk and protective factors. Content is delivered most often via weekly groupbased modules, presented by counselors, in a predetermined sequence, and within a safe environment, via activities designed to be engaging, culturally relevant, and developmentally appropriate (Kirby et al., 2006). Some programs also include general life skills such as problem solving, communication, assertiveness, and insight building (Boustani et al., 2014; Kirby & Laris, 2009).

A review of 55 sexual health programs with rigorous research designs (15% focused exclusively on pregnancy prevention, 40% focused on both HIV/STD and pregnancy prevention, and 45% focused only on STD/HIV prevention), revealed variable success at reducing risky sexual behaviors, as measured by delayed initiation (41% of programs successful), decreased frequency of sex (31%), fewer sexual partners (40%), increased condom use (42%), and increased use of contraception (40%; Kirby & Laris, 2009). Programs were delivered in a variety of settings (school, community, clinic) and data showed the greatest impact for low- and middle-income youth.

### Current Interventions Are Insufficient to Meet the Needs of Youth in Foster Care

Although high rates of teen pregnancy among youth in foster care reflect multiple complex and interacting factors, current sexual health and pregnancy prevention programs may be insufficient to meet the unique needs of the most vulnerable youth, such as those in or at risk for foster care or juvenile justice (Pryce & Samuels, 2010; Svoboda et al., 2012). Perhaps this reflects that programs share a common conceptual model according to which teenage pregnancies are understood as accidental, unwanted, and avoidable for teens armed with sufficient knowledge and skills to refuse unprotected sex (Pryce & Samuels, 2010). In fact, although many teen pregnancies are indeed unplanned (Davies et al., 2003; Leonard et al., 2013), approximately 35% of them are intended (Courtney et al., 2005).

Qualitative interviews with youth in care and youth care workers reveal that too little information is available too late (Love et

al., 2005). Foster youth initiate sex earlier than non-foster-care youth and before encountering any information about contraception (Hotz et al., 2005). They report challenges to accessing condoms and concerns that using them might ruin the mood or decrease pleasure (Love et al., 2005). Some foster teens perceive that benefits to having a baby outweigh the costs (Love et al., 2005). Desire for pregnancy is associated with family dysfunction and lack of family connectedness (Davies et al., 2003), both characteristics common to youth in or at risk for foster care. Youth report several reasons for wanting a baby related to emotional growth (e.g., healing childhood wounds or seeking attachment to baby or baby's father; Leonard et al., 2013; Lesser, Anderson, & Koniak-Griffin, 1998; O'Hare, 2008; Williams & Vines, 1999) or independence (e.g., exiting the child welfare system and obtaining independent living; Stevens-Simon, Kelly, Singer, & Cox, 1996; Williams & Vines, 1999).

While prior studies provide youth data or youth perspectives on teen pregnancy, we are only aware of one study that included a sample of youth care workers (Dworsky & DeCoursey, 2009), whose interviews emphasized access and utilization of services for pregnant and parenting foster care youth. Youth care workers are a good choice for qualitative interviewing. They interact with high frequency and via multiple roles with youth in their care, and often they belong to the same community as the youth, thus providing insight regarding neighborhood influences. Hence, youth care workers are well positioned to provide a unique perspective on teen pregnancy. Furthermore, youth may feel shame or embarrassment that may bias their responses to questions, whereas workers are less likely to feel inhibited. Lastly, as a workforce involved with sexual health and pregnancy prevention programing for youth, care workers are well positioned to speak to intervention feasibility, needs, content, format, and delivery.

### **The Current Study**

We conducted semistructured interviews with youth care workers (n=10) from a shelter for youth in or at risk for foster care to examine possible contributors to inflated rates of teenage pregnancy among this vulnerable group. Questions focused on perceptions regarding the costs and benefits of teen pregnancy and potential new avenues for prevention programming. We predicted that youth care workers would (a) echo concerns previously highlighted in the literature, including insufficient knowledge about sexual health and lack of access to birth control and other forms of contraception and (b) highlight their impression of teenagers' perceived ambivalent desires for pregnancy, with possible benefits that may outweigh underestimated costs and consequences. Findings will inform the design of a sexual health intervention uniquely tailored for the needs of youth at highest risk for pregnancy and poor outcomes.

### Method

#### **Participants**

Ten youth care workers (60% female, 60% African American, 40% Latino) participated. They were employed by a shelter for teenagers in foster care or at risk for foster care and held positions

that involved daily contact with youth including clinicians (n = 5), shift leaders (n = 3), nurse (n = 1), and director of shelter operations (n = 1). They reported experience working with children in foster care (Range = 3 to 30 years, M = 11.1 years, SD = 8.09), length of employment at the shelter (Range = 1 to 3 years, M = 1.75 years, SD = 0.95), and direct contact with youth per week (Range = 5 to 40 hr, M = 20.6 hr, SD = 8.9).

The collaborating youth shelter is located in a large city in the southeastern United States. Two sites together serve 700 youth and families each year, and both sites participated in the current study. The shelter provides temporary accommodations as well as food, schooling, and mental health care (inpatient and outpatient) to youth in foster care (removed from their homes and awaiting placement, approximately 30%) or at risk for foster care (by virtue of elevated family dysfunction, approximately 70%). Youth in both categories and at both sites share similar demographics. They are males (50%) and females (50%), ages 11 to 17, with the majority ages 15 to 16 (M = 14.87, SD =1.66, median = 15, mode = 16). They are of racial and ethnic minorities (51% Hispanic, 49% African American) and from families characterized by economic vulnerability and high rates of dysfunction (e.g., truancy, youth and parental substance abuse, domestic violence, youth and parental justice involvement). Youth are referred or directed to the shelter by local police officers or Department of Children and Families caseworkers, though a subset of youth arrive on their own (e.g., runaways) or accompanied by family. Youth remain at the shelter for as little as 1 week and as long as 10 weeks (M =3.78, SD = 2.54). All staff members in supervisory or service delivery roles were eligible to participate.

### **Materials and Procedures**

Following approval from the shelter's director and the university's Institutional Review Board, the first author invited youth care workers to participate in a brief interview related to inflated teenage pregnancy rates among youth in foster care. One hundred percent of youth care workers who were approached about participating (10 of 10) consented to participate. For interested workers, time was planned to complete consent documents (for participation and audio-recording), demographic information, semistructured interview (administered by the first author), and an accompanying measure regarding priorities of sexual health and pregnancy-prevention programming efforts.

**Semistructured interviews.** Semistructured interviews were designed to examine youth care worker impressions regarding the perceived costs and benefits of teenage pregnancy among youth in or at risk for foster care. Questions were few and focused to ensure completion of the interview within a brief amount of time. They were planned for 30 min acknowledging the competing priorities, limited time available for participation, and absence of compensation. Additional time for consenting, collecting demographics, and completing the checklist described next together totaled closer to 40 to 50 min of workers' time. The interview began with broad questions regarding general knowledge of teen pregnancy. Then, we presented four open-ended questions based on extensive literature reviews and informal conversations with teenagers and staff at the shelter: a) To what extent do you think

youth living in this shelter are at higher risk for teen pregnancy than other youth in the community? b) What do you think some of those teens may perceive as possible benefits of teen pregnancy? c) What do you think some of those teens may perceive as possible costs of teen pregnancy? and d) What do you think adults, teachers/schools, and community programs can do to help teens in foster care delay pregnancy? Each question was followed by a brief set of probes to elicit additional detail. Interviews lasted on average 27 min (Range: 13 to 42 min, SD = 12.18). Audio recordings were professionally transcribed for coding.

Prevention priorities checklist. This checklist was developed for this study to elicit youth worker perspectives on content for sexual health and prevention programming for youth in or at risk for foster care. Topics presented on the checklist were derived from a recent comprehensive literature review of treatment elements common to existing evidence-based sexual health programs (Boustani et al., 2014). The list was divided into two parts: a) Building knowledge (8 items): risk behaviors, STDs, abstinence, healthy relationships, puberty and hygiene, costs and consequences of teen pregnancy, benefits of delaying sex, benefits of safe sex; and b) Building skills (10 items): condom use, problem solving, decision making, assertiveness, communication with partner, communication with parent, autonomy, personal responsibility, decrease barriers to contraceptive use, and discuss feelings and emotions. Workers were instructed to nominate three most important elements from each category that should be included in a program for youth in foster care. Frequency counts for each element summarized workers' perspectives on the critical ingredients of sexual health programming for this high risk population.

**Data analysis.** Transcripts were coded to identify emergent themes. Following convention (Akers, Yonas, Burke, & Chang, 2011; Garwick, Rhodes, Peterson-Hickey, & Hellerstedt, 2008; Kegler, Bird, Kyle-Moon, & Rodine, 2001; Rosengard, Pollock, Weitzen, Meers, & Phipps, 2006), coding procedures began with "open coding" for which two independent graduate student coders reviewed each transcript line by line to identify words or phrases related to the overall theme of teenage pregnancy. Both coders then met to compare codes to ensure all relevant phrases were captured and none were missed. The second step involved "axial coding" during which the same two coders reviewed the initial list of words and phrases to identify major themes across groups of words. They subsequently organized these themes into hierarchical categories to create a codebook. Next, two new, independent, graduate student coders were trained to reliability, by coding training excerpts until they reached comparable coding (pooled  $\kappa = 0.82$ ) and recoded all transcripts according to the codebook. The final step involved "consensus coding," during which the first author reviewed both coders' transcripts and met with them to resolve any inconsistencies.

### **Results**

### **Thematic Overview**

We coded nine transcripts representing 10 interviews (at their request, two youth care workers were interviewed together). A

total of 447 excerpts were coded across all interviews (open coding), with a range of 31 to 73 excerpts for each interview (M =46.35, SD = 18.2). Excerpts (direct quotes from the participants) were organized into several themes (e.g., family functioning, communication) that in turn were organized for the codebook into four higher-order categories (axial coding): a) Risks for teen pregnancy and parenting, b) Perceived benefits of teen pregnancy, c) Perceived consequences of teen pregnancy, and d) Potential solutions to prevent teen pregnancy. Below we present representative excerpts of the most frequent themes from each of the four categories. Each theme is organized into one of the four higher-order categories. Themes are presented in order of the percentage of workers who endorse them (highest to lowest) within each category. Detailed information about percentage and overall frequency counts for each theme are presented (i.e., number of individual excerpts coded as representing that theme across all workers) in Table 1.

### Category 1: Risks for Teen Pregnancy and Parenting

Youth care workers cited a variety of risk factors that they believe influence sexual risk taking among teens. Most commonly noted was lack of family functioning, followed in order by lack of knowledge, lack of adult presence, life stressors, unresolved emotional issues or trauma, peer or cultural pressures, and a physical drive to have sex. Other reasons offered by fewer than 50% of workers are included in Table 1.

**Theme 1.1.** Lack of family functioning emerged as the most common risk factor for unprotected sex and teen pregnancy. Workers described that youth at their shelter came from "hostile" and "volatile" home environments characterized by a "generational curse," "poor communication," and high rates of parental psychopathology, drug abuse, and incarceration. Youth were described as being "isolated," "emotionally cut off" with few models for and minimal exposure to healthy families. One respondent described a conversation with an adolescent who said: "I don't know of a different world, like a healthy relationship with a partner, coming together and building a family. What is a family? I have no idea what a family is."

**Theme 1.2.** Lack of knowledge, as suggested in the literature, emerged as one of the reasons for teen pregnancy with most capacity for change. Youth care workers described that many of their youth lack basic knowledge about sexual health and minimize the health risks associated with becoming sexually active:

I'll say that 90% of the problem is that they don't have enough information (...) Most of them think that STDs are curable; take some medication, that's it. Some of the STDs are not curable, so again, lots of (lack of) information on every aspect of having sexual contact, I think

Lack of information extended to pregnancy as well, and several youth care workers expressed that their youth lack information about how to protect themselves, such as where and how to access contraceptives: "They get pregnant because they don't know how to avoid getting pregnant."

**Theme 1.3.** Lack of positive adult presence was described by a lack of monitoring or supervision after school, few examples of healthy relationships, and limited mentorship. Although this theme was mentioned by seven different workers, it was not discussed in detail, and usually within the context of lack of family functioning.

**Theme 1.4.** Life stressors refer to stressors that extend beyond parental behaviors and family dynamics. Youth care workers described an additional set of individual life stressors that place their youth at high risk for unprotected sex, teen pregnancy, and STDs. "Usually teens in this context are either homeless, locked out, or within this custody of the state." They often experience "higher exposure to crime, higher exposure to victimization, exploitation, higher exposure to abuse, domestic violence." These early life experiences lead them to develop a host of problems including "lack of impulse control and anger management issues," and "increased sexual behaviors." As one person described:

Kids in DCF, they're moving from one foster place—if a foster parent said I need them to go, they need to go, so they don't have that stability. They don't trust anybody. Then they are susceptible to being bamboozled, for a lack of a word, by the streets, of just a little type of trust and safety.

**Theme 1.5.** Emotional trauma emerged as a separate, yet related theme to life stressors. Several workers described histories of physical and sexual abuse experienced by foster youth in their care, and they explained how trauma may shape youth sexual risk taking and desire for pregnancy: "Their narrow goal is to run from pain (. . .). Sometimes babies, for young people is to replace the pain." Childhood trauma and multiple separations from their biological family was described as most damaging to youth: "It is major and it follows them into adulthood you know if they don't clear that thought or at least work with it, it affects all types of relationships: work and at home, and intimate relationships throughout their lives."

**Theme 1.6.** Peer and cultural pressure for teenagers to become sexually active took several forms, but the main theme revolved around the need to belong to a group or a culture within their peer circles, in which having sex and getting pregnant are normative and desirable: "16, 17-year-old girl sees all her friends getting pregnant so she wants to do the same thing"; "they see their friends, and their friends are talking about having sex and so on, so they feel left out if they're not having sexual contact like their friends." Also noted was a need to feel that they belong to somebody, usually having sex with their partner satisfied that need: "a need to belong and often times they think that the guys that they're with it-it's like they, need to belong to a person, they want to feel special."

**Theme 1.7.** Physical drive to have sex was discussed in the context of how youth may impulsively have sex for pleasure, without thinking about the consequences such as an unplanned pregnancy, blaming "raging hormones" and "need for that pleasure" and those "physical feelings" that they feel need to be satisfied as reasons why youth engage in risky sexual behaviors.

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**Table 1.** Frequency Counts of Excerpts Per Code and of Workers Who Cited That Code (\*N Out of 9 Interviews With 10 Staff)

	Interviews cited*	Number of excerpts
Reasons for teen pregnancy and parenting		
Lack of family functioning	9	37
Lack of knowledge	9	19
Lack of positive adult presence	7	7
Life stressors	6	19
Unresolved emotional issues or trauma	6	15
Peer and cultural pressures to have sex and/or babies	5	14
Physical pleasure, drive to have sex	5	9
Accidental pregnancy/unplanned sex	4	8
Getting attention from parents, peers, community	3	5
Fear of stigma	3	3
Lack of skills	2	4
Abstinence policies	2	2
Lack of access	2	2
Don't take care of themselves	2	2
	1	6
Religious and cultural stigma	1	5
Stereotype of being a "man"	1	3
Perceived benefits of teen pregnancy and parenting	10	20
Create emotional connection with baby	10	20
Keep romantic partner	10	20
Financial incentives	9	17
Prove self as independent and adult	5	22
Babies are cute	4	4
Financial incentive to have a sexual partner	1	1
Perceived costs and consequences		
Not thinking or knowing consequences	9	22
Educational consequences	5	10
Decreased social life	5	5
Financial consequences	4	8
Put responsibility of their baby on their parents	2	2
Forced to have their baby	1	1
Stigma/shame of being a pregnant teen or a teen parent	1	1
Potential solutions		
Proactive and/or preventive system-wide efforts	8	23
Positive adult influence	7	13
Educate about the realities of having a baby	6	24
Psychoeducation	6	11
Harm reduction education (condom use)	5	12
Abstinence education	5	4
Increase access to sexual health resources	4	10
Strengthen families	4	4
Decrease stigma and shame—talk about sex	2	9
Skills training	2	6
Increase monitoring and decrease opportunities for sex	2	2
Parenting education for parenting teens	1	1
Putting girls on birth control	1	1
Other thoughts about teen pregnancy		
Teen dad issues	6	11
Having a baby while in foster care or in crisis	5	8
Abortion	3	4
Lack of preparation to become a teen parent	3	2
Prostitution	2	7
Spending money on self over baby	2	3
Potential for abuse	2	2
1 Otomat 101 abuse		

# Category 2: Perceived Benefits of Teen Pregnancy and Parenting

Youth care workers spoke with great confidence about what they perceived to be teens' expectancies related to the benefits of pregnancy and parenting. They cited the teen's desire to create an emo-

tional connection with their baby, and desire to secure their relationship with their romantic partner. Workers also suggested that teens expect certain financial incentives to accompany parenting and they wanted be viewed and treated as an independent adult. Other reasons offered by fewer than 50% of workers are listed in Table 1.

**Theme 2.1.** Create an emotional bond with the baby appeared to reflect youth experience of "abandonment" and desire for family attachments they were denied growing up in a home characterized by dysfunction and want: "They've never had love, someone to love." Babies were perceived as filling a void and providing hope for a future that included healthier relationships and emotional connections via "a sense of family, a sense of unity." Simply stated, youth workers reported that the absence of love in their families of origin and deep longing for reciprocity—to give and receive love—led youth to romanticize a new life wherein a baby was viewed as their opportunity to "create (their) own family."

**Theme 2.2.** Keep romantic partner referred to youth worker perceptions that youth wanted a baby as a mechanism by which to secure their romantic relationships and thereby create stability and consistency in their lives. Girls were described as wanting to "keep a man in their life longer" and boys were described as "intentionally getting the girl pregnant in hopes of keeping her." Overall, teens were perceived as believing that a baby would give their partner reason:

... to actually stick around in their life this time cuz most of the them like their parents are in and out, out of jail or just in out of their life period. So if they have a child by somebody else, that would give them a reason to be around.

**Theme 2.3.** Financial incentives refer to worker perceptions that youth expected a baby to bring government assistance. They spoke of a "generational curse"—at home and within the broader community—a shared norm that attributed high value and positive expectancy to welfare: "easy money that they don't have to work for." First, welfare was considered a vehicle by which to leave home, exit the system, and seek independent living: "It's an easy way outta the parents' house, so even if public assistance, even if that's a start or something that's long-term, it's definitely something." Moreover, increased financial burden associated with having a baby was minimized "because a lot of them will say well since I'm so young I'll get food stamps, they will give me food for the baby, they will help me with daycare."

**Theme 2.4.** Desire for independence, on the one hand, reflects an age-appropriate developmental milestone (Eccles et al., 1991). But according to participating youth care workers, youth desire for independence was complex and multifaceted. Very simply, it reflected the desire to be grown up: "I'm an adult because I have a kid." But more than that, it reflected a longing to prove themselves better than their parents: "They feel like if they have a kid they can give them a chance to do it right and do it better than their parents." It reflected an opportunity to assume control, be responsible, and create stability, perhaps to compensate for the long-standing instability that characterized their family of origin. Workers also reported that youth wanted a baby as something that "would be their own," "something that actually belongs to them," reflecting a desire for something stable—"this is that one thing they can control."

## Category 3: Perceived Costs and Consequences of Teen Pregnancy

Youth care workers strongly agreed that most youth are completely unaware of or else deny or minimize the consequences of having a baby as a teenager. When prompted, they were able to offer a few perceived costs including educational, social, and financial consequences.

**Theme 3.1.** Lack of awareness. The majority of the discussion focused on adolescents' overall lack of awareness regarding costs and consequences of becoming a teen parent. Most indicated that teens begin to think about the consequences only after it is too late: "I think all of that is on the back burner, and it doesn't come forward until something happens like an STD or pregnancy." A few respondents suggested that some youth do not fully understand the consequences even after the baby is born: "They don't have a clue. It's like all they think about is the beauty of this little bundle in their arms cuz they don't understand the responsibility . . ." In particular, there was concern that teens had little appreciation for the financial consequences of teen parenthood, mirroring the aforementioned perception that government assistance would be sufficient to raise a baby, despite their own experience of growing up on welfare and in poverty:

They live in the projects or something like some government assisted home, and it's look how you're living, and then you wanna have a child, and your parent, the parents' barely making it, but I don't think they look at the cost.

In fact, workers observed teen parents to spend money irresponsibly, even after their baby was born:

(They) have (their) nails and hair done and they not looking at the reality of taking care of baby and is not oh I bought a couple of outfits, some powder and milk. No, you have to set that child up for the rest of his or her life as far for future, medical wise. What if you can't get that check from welfare, what are you going to do?

**Theme 3.2.** Educational costs. When prompted, some respondents spoke about a subset of adolescents aware that pregnancy and parenting may interfere with completing high school or completing on time: "Some are able to attend school and tend to the baby's needs, and some are not—some can't handle the pressure."

**Theme 3.3.** Social costs. Some respondents suggested that teens considered potential loss of freedom and decreased opportunities for socializing with peers that would accompany parenthood: "They won't have the freedom of going wherever they wanna go every time they wanna go because they have somebody to take care of."

**Theme 3.4.** Financial costs. Lastly, a few respondents noted that some teens were more realistic about the financial implications of raising a baby, although most believed teens only began to consider such costs after they were already pregnant:

They might—maybe when they get to the point that they're pregnant, that they're about to have their baby, that they don't have the money to take care of the baby or take care of themselves, maybe at that point they start thinking of financially.

### **Category 4: Potential Solutions**

Youth care workers were invited to offer potential solutions to the high rates of teen pregnancy and teen parenting among youth in or at risk for foster care. Many cited the importance of systemwide prevention efforts and the importance of having a positive adult influence. Educating teens about the realities of having a baby also emerged as a potential solution. Other themes included general psychoeducation and harm reduction efforts.

**Theme 4.1.** System-wide prevention efforts, including community, school, and media-based strategies, were enthusiastically endorsed as the best strategy for reducing pregnancy among teens in general. Many suggested that sex education in the schools was the place to start: "They need to put more—they need to take a look at sex education in the school system." Workers also described the importance of providing access to prevention programs, testing, and contraception:

... to have random STD screenings or continual type of campaigns or legislature that says certain social service agencies need to, if you're federally or state funded, to have pregnancy prevention, psychoeducational programs once every 6 months or per their compliance with regulatory measures or something to that effect.

Several youth workers alluded to a key opinion leader model (Burt, 1999; Locock, Dopson, Chambers, & Gabbay, 2001) noting the power of good role models and celebrity endorsements:

... bringing in a celebrity to maybe endorse a campaign of sorts, made a couple of talks or in the community, and then had the local paper showcase it. Maybe even—yeah, so sponsors have the campaign the youth can relate to that will bring awareness to the issue.

**Theme 4.2.** Positive adult influence refers to an opportunity for positive role modeling, support, or mentoring that was largely absent in youth families of origin. Particularly, workers expressed confidence in the value of a mentor model:

I believe in a mentor, positive mentors just gettin' in the kids' lives and showing them what's right and what's wrong, and not to make the same mistakes that we made in life, or just giving 'em examples of what worked and what didn't work.

While to some extent the youth workers were envisioning a more generic positive influence, some were thinking more specifically about creating an opportunity for youth to talk more explicitly about sex with a caring and knowledgeable adult:

A lot of young ladies out here don't have that mentor, that person that can come and talk to them or they feel they go talk to and say hey I'm ready to have sex but in reality your mind is not ready to have sex.

**Theme 4.3.** Educating teens about the realities of having a baby was widely acknowledged as important. Some suggested leveraging media: "It could be a YouTube video (. . .) where you see a 16-year old girl running through all the thoughts a 16-year old girl might run through as to getting pregnant." Others proposed more active learning opportunities—"show me, don't tell me"—to raise youth awareness, for example, about the financial implications of having a baby:

Let's go to Toys R Us. Let's go to Walmart. Let's see how much this stuff actually costs (. . .). This is real. This is not the average person made blah, blah, blah. No, this is how much I make. I don't know about over there. This is something if my household bring in and this is how much my expenses are. Bunch of money. This is serious.

Finally, several workers suggested that youth may be more responsive to messages from "near peers" who share similar demographic characteristics or community experiences— "I'm talking about looking next-door neighbor-type person, the family next door"—and perhaps some who also have become teen parents "I think you have to bring in people who've been there, done that."

**Theme 4.4.** General psychoeducation and harm reduction efforts versus abstinence education were also discussed. Generally, youth care workers agreed that abstinence education was a waste of time, although some suggested it could be part of a message that also emphasized harm reduction: "I call it straight talk to speak to them about what's going on, and don't try to censor it. (. . .) You need to educate 'em." There was general consensus that for this population, harm reduction was a smarter, more strategic, and likely more effective approach: "We're not condoning this behavior, but if you're going to engage in high-risk behaviors, know the consequences and at least, at minimum, protect yourself." Workers discussed the importance of providing youth with opportunities for hands-on skills practice, in particular regarding condom use: "Most teenagers, they don't have a condom. They know to put it on, but they don't know the right way to put it on; they don't know the right way of keeping a condom." They also described the importance of providing youth with tools and knowledge about sexual health resources available in their communities.

### **Prevention Priorities Checklist**

Frequency counts summarized worker perspectives on the knowledge and skills most critical for youth to acquire during sexual health and pregnancy prevention programming. From eight "knowledge" items, three emerged as most supported (received a ranking of 1, 2, or 3) by a minimum 50% of respondents. These included teaching youth about risk behaviors (nominated by 90% of participating youth workers), followed by teaching youth about STDs (70%), and building healthy relationships (50%). From 10 "skills" items, three emerged as most supported (received a ranking of 1, 2, or 3) by a minimum 50% of respondents. These included developing condom use skills and problem solving skills (each nominated by 60% of staff), followed by decision-making skills (50%). Table 2 provides details about the number of times each item was nominated as a top 3 component.

### **Discussion**

Youth care workers offer an important perspective on the perceived costs and benefits of teen pregnancy and sexual health education for vulnerable youth. Their daily experience with youth in foster care, coupled with their opportunity to intervene, formally and informally, lends credibility and relevance to their views, interpretations, and proposed solutions. We predicted that youth care workers would (a) echo concerns previously highlighted in the literature, including unique risk factors for youth in care and (b) report ambivalent desires for pregnancy among youth, with perceived benefits that may outweigh anticipated costs and consequences. The qualitative data lend initial support to our hypotheses, indicating that staff perceive youth may overestimate the benefits and underestimate the costs of being a teen parent.

Knowledge	Total nominations	Skills	Total nominations
Risk behaviors	9	Condom use	6
STDs	7	Decision making	6
Healthy relationships	5	Problem solving	6
Benefits of delaying	3	Communication with parents	5
Benefits of safe sex	2	Personal responsibility	2
Cost and consequence	2	Assertiveness	1
Abstinence	1	Decrease barriers	1
Sexual abuse	1	Family and natural support	1
		Feelings and emotions	1

Table 2. Number of Nominations as a Top Three Sexual Health Programming Component

Youth care workers reported multiple risk factors, especially family dysfunction and childhood abuse, reflecting traumatic histories that differentiate youth in or at risk for foster care from youth in the community. These findings support a rich literature that indicates youth lacking social support (Whiteley & Brown, 2010), abandoned or runaway teens (Thompson, Bender, Lewis, & Watkins, 2008), abused and neglected teens (Noll & Shenk, 2013), and teens who live in shelters (Sheaff & Talashek, 1995), are at increased risk for teen pregnancy. For instance, in a prospective study, maltreated adolescent girls were twice as likely as nonmaltreated peers to become pregnant (20.3% vs. 9.4%), even after controlling for other known risk factors such as demographics, high levels of sexual activity, and low contraceptive use. Youth in the maltreated group who reported neglect had 3 times the rate of teen births (27.5%) than those in the nonmaltreated group (Noll & Shenk, 2013). In fact, a meta-analysis of 21 studies found an aggregate effect size of 2.21 for teen pregnancy among maltreated youth, especially those experiencing sexual abuse (Noll, Shenk, & Putnam, 2009). A study of foster care youth in California further highlights the inflated rates of teenage pregnancy among youth in care, especially if they have experienced abuse (Putnam-Hornstein, Cederbaum, King, & Needell, 2013).

### **Perceived Costs and Benefits**

Our data suggests that workers believed youth minimized the potential costs of teen pregnancy, supporting prior findings that some at-risk youth prioritize short-term benefits over long-term consequences (Green, Fry, & Myerson, 1994). This may reflect a larger body of literature on adolescent impulsivity, which has been linked to a lack of maturity in the prefrontal cortex (Casey, Jones, & Hare, 2008), and partially explains why adolescents engage in high-risk behaviors such as unprotected sex. In fact, some research suggests that youth living in poverty, with heightened risk for psychological distress, may have even more difficulty delaying gratification compared to their peers (Evans & English, 2002). Related studies on discount rates present youth with opportunities to receive a cash prize immediately (\$400) or wait different lengths of time for a little more money, double (\$800) or triple the cash prize (\$1,200). Youth with higher discount rates (i.e., youth who place a higher priority on the here and now, and in turn discount a future larger sum of cash) were significantly more likely to initiate sex earlier (before age 16), engage in risky sexual behaviors, have multiple sexual partners in a short

amount of time, become infected with an STD, and become (or get someone) pregnant (Chesson et al., 2006).

As expected, youth workers reported that many youth in their care perceive explicit benefits to becoming teen parents, thereby helping to explain why youth in prior studies express an ambivalent desire for pregnancy (e.g., Courtney, Terao, & Bost, 2004; Cowley, Farley, & Beamis, 2002; Davies et al., 2003; Jaccard, Dodge, & Dittus, 2003). The most salient benefits reported here included opportunities to create an emotional connection with their baby, secure their relationship with their partner, and prove themselves as independent adults. Decades of research on attachment theory suggests that healthy attachment is critical for a healthy developmental trajectory (Bretherton, 1992; Carlson & Sroufe, 1995). Perhaps it follows that for youth in foster care, the absence of secure attachments within their families of origin lead them to seek emotional connection elsewhere, with a baby or romantic partner. Furthermore, workers frequently referred to youth wanting to do things differently from their parents and prove themselves, including wanting to feel grown-up and emancipated. Seeking independence at this age is normative (Spear & Kulbok, 2004), yet for youth at high risk, opportunities to seek independence through positive pathways such as social and academic competence (Noom, Deković, & Meeus, 1999) is undermined. This lack of psychosocial functioning (e.g., school failure, lack of family attachment, involvement in foster care) may lead youth to explore other ways to "prove" themselves, including becoming young parents.

### Reducing Teen Pregnancy Among Youth in Foster Care

Traditional sexual health programs maintain an underlying assumption that teen pregnancies are unplanned and unwanted, such that increasing knowledge about the etiology and consequences of STDs, and how to use or access a condom will be sufficient to encourage adolescents either to delay sex or use birth control (Pryce & Samuels, 2010). The current findings suggest that knowledge may be necessary but not sufficient for this vulnerable group of youth, for whom perceived benefits may outweigh the underestimated costs, and whose rates of teen pregnancy and parenting are disproportionate and stable. We propose that prevention programs will be more effective at meeting the unique needs of foster care youth if they target more directly the ambiguous desire for

pregnancy, including a close examination of perceived costs and benefits associated with teen parenting.

For instance, youth care workers proposed that teen parents (in or out of foster care) from similar backgrounds as the youth (same neighborhood, SES, and racial/ethnic background) may be influential talking to youth about the experience, costs, and benefits of having a baby. The model of using key opinion leaders from similar backgrounds has been successful in reducing risky sexual behaviors among gay men (Kelly et al., 1991). Youth peer leaders also appear to benefit from being in an opinion leader role, with their own knowledge about sexual health increased and sustained over time (Pearlman, Camberg, Wallace, Symons, & Finison, 2002). Another possibility is to integrate an explicit and engaging cost-benefit exercise, perhaps borrowing strategies from Motivational Interviewing (Baer & Peterson, 2002), used successfully in health clinics to motivate young girls at high risk for teen pregnancy to obtain and utilize birth control (Cowley et al., 2002). Related, youth care workers proposed teaching youth about the real financial costs of having a baby by preparing a household budget, calculating the specific and extensive costs associated with caring for a baby immediately and over time. We are in the process of piloting several activities with youth at the participating shelter toward the goal of reducing risks by directly intervening around the costs and benefits of teen pregnancy.

Through the prevention priorities checklist, youth care workers recommended that sexual health prevention programs should include skills related to condom use, but also more general life skills such as decision making, problem solving, and communication. These findings reflect growing attention to a set of underlying core skills that together may prevent a multiplicity of co-occurring adolescent risky behaviors, reflecting a literature on skills deficits that have been linked to sexual risk taking as well as conduct problems, alcohol and substance abuse, and mental health problems including anxiety and depression (Boustani et al., 2014). Workers prioritized these core skills over other components specific to sexual health such as the benefits of safe sex or decreasing barriers to accessing birth control.

### Limitations

The current findings should be interpreted with caution in light of the following limitations. First, the sample size was small, representing only two sites, and the interviews were brief, to increase participation in a setting with many competing demands, thereby providing a smaller data set. However, we applied rigorous and conventional qualitative methods to code and interpret the data, and given the overall lack of information available for this vulnerable group of youth, we believe the findings contribute meaningfully to inform growing solutions to a seemingly intractable problem. Second, although we believe interviewing youth care workers offers certain advantages over interviewing youth (e.g., less inhibition, perspective from interventionist), limitations to this design also warrant mention. Perhaps most important, youth care workers are reporting their impressions of what youth conceptualize as costs or benefits to teenage pregnancy and parenthood. In fact, previous investigators have interviewed youth directly (e.g., Love et al., 2005; Lesser et al., 1998; Williams & Vines, 1999), and our data support their findings regarding the reasons why teens may have ambiguous desires toward pregnancy and parenting. We believe perspectives from both samples provide unique and important information to inform intervention development for youth in foster care.

#### **Future Directions**

Despite their increased vulnerability and disproportionate rates of teen parenting, there currently exist no evidence-based sexual health interventions or pregnancy prevention programs uniquely tailored to the needs of youth in or at risk for foster care. It is worth mentioning, however, that the National Campaign to Prevent Teen Pregnancy is in the process of evaluating "Power through Choices," an adaptation of "Making Proud Choices" (http://www.aphsa.org/content/APHSA/en/ actions/SPECIAL\_INITIATIVES/TheNationalCampaign.html) for youth in out-of-home care. In addition, we are continuing to collaborate with the participating teen shelter to adapt an evidence-based sexual health curriculum to respond to the unique needs of youth in foster care. Using an evidence-based and systematic framework for adapting sexual health programs (ADAPT-ITT; Wingood & DiClemente, 2008), and informed by the current findings, we are pilot testing activities that specifically address the cost-benefit ratio associated with becoming a teenage parent, utilizing recommendations extracted from the interviews and from the literature, including a systematic comparison of costs and benefits, calculating the financial costs of caring for a baby, and using peer leaders.

Although national rates of teenage pregnancy have been decreasing steadily among the general population (Hamilton et al., 2013), rates among the most vulnerable youth remain disproportionate high and stable over time. Teen parenting initiates a life trajectory characterized by decreased opportunities for educational and career success, which exacerbates the cycle of poverty. These youth face life stressors that reflect persistent and pervasive poverty; inconsistent, harsh, or unavailable parenting; and high risk for substance abuse, violence, internalizing and externalizing disorders, and sexual risk taking (Baker et al., 2005; Burns et al., 2004; Dworsky & Courtney, 2010; Tarren-Sweeney, 2008) Currently available and empirically supported sexual health and pregnancy prevention programs are designed to increase knowledge about and access to contraception, a necessary but insufficient strategy for protecting youth in care. Because of their increased vulnerability and ambiguous desire for teenage pregnancy and parenting, it is imperative to understand how to best address the unique needs of this population.

**Keywords:** adolescent pregnancy prevention; foster care; child welfare; sexual health; qualitative design

#### References

Ahrens, K. R., Katon, W., McCarty, C., Richardson, L. P., & Courtney, M. E. (2012). Association between childhood sexual abuse and transactional sex in youth aging out of foster care. *Child Abuse & Neglect*, 36, 75–80. http://dx.doi.org/10.1016/j.chiabu.2011.07.009

Ahrens, K. R., McCarty, C., Simoni, J., Dworsky, A., & Courtney, M. E. (2013). Psychosocial pathways to sexually transmitted infection risk among youth transitioning out of foster care: Evidence from a longitudinal cohort study. *Journal of Adolescent Health*, 53, 478–485. http://dx.doi.org/10.1016/j.jadohealth.2013.05.010

Ahrens, K. R., Richardson, L. P., Courtney, M. E., McCarty, C., Simoni, J., & Katon, W. (2010). Laboratory-diagnosed sexually transmitted infections in former foster youth compared with peers. *Pediatrics*, 126(1), e97–e103. http://dx.doi.org/10.1542/peds.2009-2424

- Akers, A. Y., Yonas, M., Burke, J., & Chang, J. C. (2011). "Do you want somebody treating your sister like that?": Qualitative exploration of how African American families discuss and promote healthy teen dating relationships. *Journal of Interpersonal Violence*, 26, 2165–2185. http:// dx.doi.org/10.1177/0886260510383028
- Babson, S. G., & Clarke, N. G. (1983). Relationship between infant death and maternal age: Comparison of sudden infant death incidence with other causes of infant mortality. *The Journal of Pediatrics*, 103, 391– 393. http://dx.doi.org/10.1016/S0022-3476(83)80409-0
- Baer, J. S., & Peterson, P. L. (2002). Motivational interviewing with adolescents and young adults. In W. R. Miller & S. Rollnick, *Motivational interviewing: Preparing people for change* (2nd ed., pp. 320–332). New York, NY: Guilford Press.
- Baker, C., Gibbs, I., Sinclair, I., & Wilson, K. (2005). Foster children: Where they go and how they get on. London, UK: Jessica Kingsley Publishers.
- Barnet, B., Joffe, A., Duggan, A. K., Wilson, M. D., & Repke, J. T. (1996).
  Depressive symptoms, stress, and social support in pregnant and post-partum adolescents. *Archives of Pediatrics & Adolescent Medicine*, 150, 64–69. http://dx.doi.org/10.1001/archpedi.1996.02170260068011
- Bassuk, E. L., Weinreb, L. F., Buckner, J. C., Browne, A., Salomon, A., & Bassuk, S. S. (1996). The characteristics and needs of sheltered homeless and low-income housed mothers. *Journal of the American Medical Association*, 276, 640–646. http://dx.doi.org/10.1001/jama.1996.03540080062031
- Becker, M. G., & Barth, R. P. (2000). Power through choices: The development of a sexuality education curriculum for youths in out-ofhome care. *Child Welfare*, 79, 269–282.
- Bennett, S. E., & Assefi, N. P. (2005). School-based teenage pregnancy prevention programs: A systematic review of randomized controlled trials. *Journal of Adolescent Health*, 36, 72–81. http://dx.doi.org/10.1016/ j.jadohealth.2003.11.097
- Blum, R. W., Beuhring, T., & Rinehart, P. M. (2000). Protecting teens: Beyond race, income and family structure. Minneapolis, MN: Center for Adolescent Health, University of Minnesota.
- Boustani, M. M., Frazier, S. L., Becker, K. D., Bechor, M., Dinizulu, S. M., Hedemann, E. R., & Pasalich, D. S. (2014). Common elements of adolescent prevention programs: Minimizing burden while maximizing reach. Administration and Policy in Mental Health and Mental Health Services Research. Advance online publication. http://dx.doi.org/10.1007/ s10488-014-0541-9
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28, 759–775. http://dx.doi.org/10.1037/0012-1649.28.5.759
- Bunting, L., & McAuley, C. (2004). Research review: Teenage pregnancy and parenthood: The role of fathers. *Child & Family Social Work, 9*, 295–303. http://dx.doi.org/10.1111/j.1365-2206.2004.00335.x
- Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43, 960–970. http://dx.doi.org/10.1097/01.chi.0000127590 .95585.65
- Burt, R. S. (1999). The social capital of opinion leaders. The Annals of the American Academy of Political and Social Science, 566, 37–54. http:// dx.doi.org/10.1177/0002716299566001004
- Carlson, E. A., & Sroufe, L. A. (1995). Contribution of attachment theory to developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), Developmental psychopathology, Vol. 1: Theory and methods. Wiley series on personality processes (pp. 581–617). Oxford, UK: John Wiley & Sons.
- Casey, B. J., Jones, R. M., & Hare, T. A. (2008). The adolescent brain. Annals of the New York Academy of Sciences, 1124, 111–126. http://dx.doi.org/10.1196/annals.1440.010

- Chesson, H. W., Leichliter, J. S., Zimet, G. D., Rosenthal, S. L., Bernstein, D. I., & Fife, K. H. (2006). Discount rates and risky sexual behaviors among teenagers and young adults. *Journal of Risk and Uncertainty*, 32, 217–230. http://dx.doi.org/10.1007/s11166-006-9520-1
- Child Welfare Information Gateway. (2013). Foster care statistics 2012.Washington, DC: U. S. Department of Health and Human Services,Children's Bureau.
- Clausen, J. M., Landsverk, J., Ganger, W., Chadwick, D., & Litrownik, A. (1998). Mental health problems of children in foster care. *Journal of Child and Family Studies*, 7, 283–296. http://dx.doi.org/10.1023/A: 1022989411119
- Coley, R. L., & Chase-Lansdale, P. L. (1998). Adolescent pregnancy and parenthood. Recent evidence and future directions. *American Psychologist*, 53, 152–166. http://dx.doi.org/10.1037/0003-066X.53.2.152
- Connelly, C. D., & Straus, M. A. (1992). Mother's age and risk for physical abuse. *Child Abuse & Neglect*, 16, 709–718. http://dx.doi.org/10.1016/ 0145-2134(92)90107-3
- Courtney, M. E., Dworsky, A. L., Cusick, G. R., Havlicek, J., Perez, A., & Keller, T. E. (2007). Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 21. Chicago, IL: Chapin Hall at the University of Chicago.
- Courtney, M. E., Dworsky, A. L., Gretchen, R., Keller, T. E., Havlicek, J., & Bost, N. (2005). Midwest evaluation of the adult functioning of former foster youth: Outcomes at Age 19. Chicago, IL: Chapin Hall at the University of Chicago.
- Courtney, M. E., Dworsky, A. L., Lee, J. S., & Raap, M. (2009). Midwest evaluation of the adult functioning of former foster youth: Outcomes at ages 23 and 24. Chicago, IL: Chapin Hall at the University of Chicago.
- Courtney, M. E., Terao, S., & Bost, N. (2004). Midwest evaluation of the adult functioning of former foster youth: Conditions of the youth preparing to leave state care. Chicago, IL: Chapin Hall Center for Children at the University of Chicago.
- Cowley, C. B., Farley, T., & Beamis, K. (2002). "Well, maybe I'll try the pill for just a few months": Brief motivational and narrative-based interventions to encourage contraceptive use among adolescents at high risk for early childbearing. *Families, Systems, & Health*, 20, 183–204. http://dx.doi.org/10.1037/h0089493
- Damnjanovic, M., Lakic, A., Stevanovic, D., & Jovanovic, A. (2011).
  Effects of mental health on quality of life in children and adolescents living in residential and foster care: A cross-sectional study. *Epidemiology and Psychiatric Sciences*, 20, 257–262. http://dx.doi.org/10.1017/S2045796011000291
- Davies, S. L., DiClemente, R. J., Wingood, G. M., Harrington, K. F., Crosby, R. A., & Sionean, C. (2003). Pregnancy desire among disadvantaged African American adolescent females. *American Journal of Health Behavior*, 27, 55–62. http://dx.doi.org/10.5993/AJHB.27.1.6
- Deal, L. W., & Holt, V. L. (1998). Young maternal age and depressive symptoms: Results from the 1988 National Maternal and Infant Health Survey. American Journal of Public Health, 88, 266–270. http://dx.doi.org/10.2105/AJPH.88.2.266
- DiClemente, R. J., Wingood, G. M., Harrington, K. F., Lang, D. L., Davies, S. L., Hook, E. W., III, . . . Robillard, A. (2004). Efficacy of an HIV prevention intervention for African American adolescent girls: A randomized controlled trial. *The Journal of the American Medical Association*, 292, 171–179. http://dx.doi.org/10.1001/jama.292.2.171
- Dubowitz, H., Feigelman, S., Harrington, D., Starr, R., Jr., Zuravin, S., & Sawyer, R. (1994). Children in kinship care: How do they fare? *Children and Youth Services Review*, 16, 85–106. http://dx.doi.org/10.1016/0190-7409(94)90017-5
- Dworsky, A., & Courtney, M. E. (2010). The risk of teenage pregnancy among transitioning foster youth: Implications for extending state care beyond age 18. *Children and Youth Services Review*, 32, 1351–1356. http://dx.doi.org/10.1016/j.childyouth.2010.06.002

- Dworsky, A., & DeCoursey, J. (2009). *Pregnant and parenting foster youth: Their needs, their experiences*. Chicago, IL: Chapin Hall at the University of Chicago.
- Eccles, J. S., Buchanan, C. M., Flanagan, C., Fuligni, A., Midgley, C., & Yee, D. (1991). Control versus autonomy during early adolescence. *Journal of Social Issues*, 47, 53–68. http://dx.doi.org/10.1111/j.1540-4560.1991.tb01834.x
- Ellis, B. J., Del Giudice, M., Dishion, T. J., Figueredo, A. J., Gray, P., Griskevicius, V., . . . Wilson, D. S. (2012). The evolutionary basis of risky adolescent behavior: Implications for science, policy, and practice. *Developmental Psychology*, 48, 598–623. http://dx.doi.org/10.1037/a0026220
- Evans, G. W., & English, K. (2002). The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development*, 73, 1238–1248. http://dx.doi.org/10.1111/ 1467-8624.00469
- Fagot, B. I., Pears, K. C., Capaldi, D. M., Crosby, L., & Leve, C. S. (1998). Becoming an adolescent father: Precursors and parenting. *Developmental Psychology*, 34, 1209–1219. http://dx.doi.org/10.1037/0012-1649.34.6.1209
- Fergusson, D. M., & Woodward, L. J. (2000). Teenage pregnancy and female educational underachievement: A prospective study of a New Zealand birth cohort. *Journal of Marriage and the Family*, 62, 147–161. http://dx.doi.org/10.1111/j.1741-3737.2000.00147.x
- Figueiredo, B., Pacheco, A., & Costa, R. (2007). Depression during pregnancy and the postpartum period in adolescent and adult Portuguese mothers. Archives of Women's Mental Health, 10, 103–109. http://dx.doi.org/10.1007/s00737-007-0178-8
- Finkelstein, J. W., Finkelstein, J. A., Christie, M., Roden, M., & Shelton, C. (1982). Teenage pregnancy and parenthood: Outcomes for mother and child. *Journal of Adolescent Health Care*, 3, 1–7. http://dx.doi.org/ 10.1016/S0197-0070(82)80020-X
- Garwick, A. W., Rhodes, K. L., Peterson-Hickey, M., & Hellerstedt, W. L. (2008). Native teen voices: Adolescent pregnancy prevention recommendations. *Journal of Adolescent Health*, 42, 81–88. http://dx.doi.org/ 10.1016/j.jadohealth.2007.08.004
- General Accounting Office. (1998). Teen mothers: Selected sociodemographic characteristics and risk factors. Washington, DC: Author.
- Green, L., Fry, A. F., & Myerson, J. (1994). Discounting of delayed rewards: A life-span comparison. *Psychological Science*, *5*, 33–36. http://dx.doi.org/10.1111/j.1467-9280.1994.tb00610.x
- Hamilton, B. E., Mathews, T. J., & Ventura, S. J. (2013). Declines in state teen birth rates by race and Hispanic origin (NCHS data brief no. 123). Hyattsville, MD: National Center for Health Statistics.
- Hardy, J. B., Welcher, D. W., Stanley, J., & Dallas, J. R. (1978). Long-range outcome of adolescent pregnancy. *Clinical Obstetrics and Gynecology*, 21, 1215–1232. http://dx.doi.org/10.1097/00003081-197821040-00023
- Harris, K. M., Florey, F., Tabor, J., Bearman, P. S., Jones, J., Udry, J. R., & National Longitudinal Study of Adolescent Health. (2009). Research design. Retrieved from http://www.cpc.unc.edu/projects/addhealth/ design.
- Harris, M. B., & Allgood, J. G. (2009). Adolescent pregnancy prevention: Choosing an effective program that fits. *Children and Youth Services Review*, 31, 1314–1320. http://dx.doi.org/10.1016/j.childyouth.2009.06.002
- Hofferth, S. L., Reid, L., & Mott, F. L. (2001). The effects of early childbearing on schooling over time. Family Planning Perspectives, 33, 259–267. http://dx.doi.org/10.2307/3030193
- Hoffman, S. (2006). By the numbers: The public costs of teen childbearing.Washington, DC: National Campaign to Prevent Teen Pregnancy.
- Hotz, V. J., McElroy, S. W., & Sanders, S. G. (2005). Teenage childbearing and its life cycle consequences: Exploiting a natural experiment. *The*

- Journal of Human Resources, 40, 683-715. http://dx.doi.org/10.3368/jhr.XL.3.683
- Jaccard, J., Dodge, T., & Dittus, P. (2003). Do adolescents want to avoid pregnancy? Attitudes toward pregnancy as predictors of pregnancy. *The Journal of Adolescent Health*, 33, 79–83.
- Jemmott, J. B., III, Jemmott, L. S., & Fong, G. T. (1998). Abstinence and safer sex HIV risk-reduction interventions for African American adolescents: A randomized controlled trial. *The Journal of the American Medical Association*, 279, 1529–1536. http://dx.doi.org/10.1001/jama .279.19.1529
- Jones, L. (2011). The first three years after foster care: A longitudinal look at the adaptation of 16 youth to emerging adulthood. *Children and Youth Services Review*, 33, 1919–1929. http://dx.doi.org/10.1016/j.childyouth.2011.05.018
- Kegler, M. C., Bird, S. T., Kyle-Moon, K., & Rodine, S. (2001). Understanding teen pregnancy from the perspective of young adolescents in Oklahoma City. *Health Promotion Practice*, 2, 242–254. http://dx.doi .org/10.1177/152483990100200308
- Kelly, J. A., St Lawrence, J. S., Diaz, Y. E., Stevenson, L. Y., Hauth, A. C., Brasfield, T. L., . . . Andrew, M. E. (1991). HIV risk behavior reduction following intervention with key opinion leaders of population: An experimental analysis. *American Journal of Public Health*, 81, 168–171. http://dx.doi.org/10.2105/AJPH.81.2.168
- Kirby, D., & Laris, B. A. (2009). Effective curriculum-based sex and STD/HIV education programs for adolescents. *Child Development Perspectives*, 3, 21–29. http://dx.doi.org/10.1111/j.1750-8606.2008.00071.x
- Kirby, D., Laris, B., & Rolleri, L. (2006). Sex and HIV education programs for youth: Their impact and important characteristics. Scotts Valley, CA: ETR Associates.
- Kools, S., Paul, S. M., Jones, R., Monasterio, E., & Norbeck, J. (2013). Health profiles of adolescents in foster care. *Journal of Pediatric Nursing*, 28, 213–222. http://dx.doi.org/10.1016/j.pedn.2012.08.010
- Leonard, S. D. D., Fantroy, J. D., & Laffert, K. (2013). Help me to succeed. A guide for supporting youth in foster care to prevent teen pregnancy. Retrieved from www.thenationalcampaign.org/resources/pdf/pubs/ Help-Me-Succeed.pdf
- Lesser, J., Anderson, N. L. R., & Koniak-Griffin, D. (1998). "Sometimes you don't feel ready to be an adult or a mom:" The experience of adolescent pregnancy. *Journal of Child and Adolescent Psychiatric Nursing*, 11, 7–16. http://dx.doi.org/10.1111/j.1744-6171.1998.tb00425.x
- Levine, J. A., Pollack, H., & Comfort, M. E. (2001). Academic and behavioral outcomes among the children of young mothers. *Journal of Marriage and Family*, 63, 355–369. http://dx.doi.org/10.1111/j.1741-3737.2001.00355.x
- Locock, L., Dopson, S., Chambers, D., & Gabbay, J. (2001). Understanding the role of opinion leaders in improving clinical effectiveness. *Social Science & Medicine*, 53, 745–757. http://dx.doi.org/10.1016/S0277-9536(00)00387-7
- Love, L. T., McIntosh, J., Rosst, M., & Tertzakian, K. (2005). Fostering hope: Preventing teen pregnancy among youth in foster care. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- MacDorman, M. A. J. (1998). Infant mortality statistics from the 1996 period linked birth/infant death data set. *Monthly Vital Statistics Report*, 46(12), Suppl.
- Manlove, J. (1998). The influence of high school dropout and school disengagement on the risk of school-age pregnancy. *Journal of Research on Adolescence*, 8, 187–220. http://dx.doi.org/10.1207/s15327795jra0802\_2
- Maynard, R. A. (1997). Kids having kids: Economic costs and social consequences of teen pregnancy. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- McFarlane, J., Parker, B., & Soeken, K. (1996). Abuse during pregnancy: Associations with maternal health and infant birth weight. *Nursing*

- Research, 45, 37–42. http://dx.doi.org/10.1097/00006199-199601000-00007
- McMillen, J. C., Zima, B. T., Scott, L. D., Jr., Auslander, W. F., Munson, M. R., Ollie, M. T., & Spitznagel, E. L. (2005). Prevalence of psychiatric disorders among older youths in the foster care system. *Journal of the American Academy of Child & Adolescent Psychiatry*, 44, 88–95. http://dx.doi.org/10.1097/01.chi.0000145806.24274.d2
- Noll, J. G., & Shenk, C. E. (2013). Teen birth rates in sexually abused and neglected females. *Pediatrics*, 131, e1181–e1187. http://dx.doi.org/ 10.1542/peds.2012-3072
- Noll, J. G., Shenk, C. E., & Putnam, K. T. (2009). Childhood sexual abuse and adolescent pregnancy: A meta-analytic update. *Journal of Pediatric Psychology*, 34, 366–378. http://dx.doi.org/10.1093/jpepsy/jsn098
- Noom, M. J., Deković, M., & Meeus, W. H. J. (1999). Autonomy, attachment and psychosocial adjustment during adolescence: A double-edged sword? *Journal of Adolescence*, 22, 771–783. http://dx.doi.org/10.1006/jado.1999.0269
- O'Hare, W. P. (2008). *Data on children in foster care from the Census Bureau*. Baltimore, MD: Annie E. Casey Foundation.
- Patel, P. H., & Sen, B. (2012). Teen motherhood and long-term health consequences. *Maternal and Child Health Journal*, 16, 1063–1071. http://dx.doi.org/10.1007/s10995-011-0829-2
- Pearlman, D. N., Camberg, L., Wallace, L. J., Symons, P., & Finison, L. (2002). Tapping youth as agents for change: Evaluation of a peer leadership HIV/AIDS intervention. *Journal of Adolescent Health*, 31, 31–39. http://dx.doi.org/10.1016/S1054-139X(02)00379-8
- Pilowsky, D. J., & Wu, L.-T. (2006). Psychiatric symptoms and substance use disorders in a nationally representative sample of American adolescents involved with foster care. *Journal of Adolescent Health*, 38, 351–358. http://dx.doi.org/10.1016/j.jadohealth.2005.06.014
- Polit, D. F., Morton, T. D., & White, C. M. (1989). Sex, contraception and pregnancy among adolescents in foster care. *Family Planning Perspectives*, 21, 203–208. http://dx.doi.org/10.2307/2135572
- Pryce, J. M., & Samuels, G. M. (2010). Renewal and risk: The dual experience of young motherhood and aging out of the child welfare system. *Journal of Adolescent Research*, 25, 205–230. http://dx.doi.org/ 10.1177/0743558409350500
- Putnam-Hornstein, E., Cederbaum, J. A., King, B., & Needell, B. (2013). California's most vulnerable parents: When maltreated children have children. Agoura Hills, CA: Conrad N. Hilton Foundation.
- Rafferty, Y., Griffin, K. W., & Lodise, M. (2011). Adolescent motherhood and developmental outcomes of children in early head start: The influence of maternal parenting behaviors, well-being, and risk factors within the family setting. *American Journal of Orthopsychiatry*, 81, 228–245. http://dx.doi.org/10.1111/j.1939-0025.2011.01092.x
- Rosengard, C., Pollock, L., Weitzen, S., Meers, A., & Phipps, M. G. (2006). Concepts of the advantages and disadvantages of teenage child-bearing among pregnant adolescents: A qualitative analysis. *Pediatrics*, 118, 503–510. http://dx.doi.org/10.1542/peds.2005-3058
- Sarri, R., & Phillips, A. (2004). Health and social services for pregnant and parenting high risk teens. *Children and Youth Services Review*, 26, 537–560. http://dx.doi.org/10.1016/j.childyouth.2004.02.010
- Schmidt, R. M., Wiemann, C. M., Rickert, V. I., & Smith, E. O. B. (2006). Moderate to severe depressive symptoms among adolescent mothers followed four years postpartum. *Journal of Adolescent Health*, 38, 712–718. http://dx.doi.org/10.1016/j.jadohealth.2005.05.023
- Sheaff, L., & Talashek, M. (1995). Ever-pregnant and never-pregnant teens in a temporary housing shelter. *Journal of Community Health Nursing*, 12, 33–45. http://dx.doi.org/10.1207/s15327655jchn1201\_4
- Smith, M. L., Gilmer, M. H., Salge, L. E., Dickerson, J. B., & Wilson, K. L. (2013). Who enrolls in teen parent education programs? An emphasis on personal and familial characteristics and services received. *Child &*

- Adolescent Social Work Journal, 30, 21–36. http://dx.doi.org/10.1007/s10560-012-0276-y
- Sousa, C., Herrenkohl, T. I., Moylan, C. A., Tajima, E. A., Klika, J. B., Herrenkohl, R. C., & Russo, M. J. (2011). Longitudinal study on the effects of child abuse and children's exposure to domestic violence, parent-child attachments, and antisocial behavior in adolescence. *Jour*nal of Interpersonal Violence, 26, 111–136. http://dx.doi.org/10.1177/ 0886260510362883
- Spear, H. J., & Kulbok, P. (2004). Autonomy and adolescence: A concept analysis. *Public Health Nursing*, 21, 144–152. http://dx.doi.org/10.1111/ j.0737-1209.2004.021208.x
- Stevens-Simon, C., Kelly, L., Singer, D., & Cox, A. (1996). Why pregnant adolescents say they did not use contraceptives prior to conception. *Journal of Adolescent Health*, 19, 48–53. http://dx.doi.org/10.1016/ 1054-139X(95)00281-V
- Stouthamer-Loeber, M., & Wei, E. H. (1998). The precursors of young fatherhood and its effect on delinquency of teenage males. *Journal of Adolescent Health*, 22, 56–65. http://dx.doi.org/10.1016/S1054-139X(97)00211-5
- Svoboda, D. V., Shaw, T. V., Barth, R. P., & Bright, C. L. (2012). Pregnancy and parenting among youth in foster care: A review. *Children and Youth Services Review*, 34, 867–875. http://dx.doi.org/10.1016/j.childyouth.2012.01.023
- Tarren-Sweeney, M. (2008). The mental health of children in out-of-home care. Current Opinion in Psychiatry, 21, 345–349. http://dx.doi.org/ 10.1097/YCO.0b013e32830321fa
- Terry-Humen, E., Manlove, J., & Moore, K. (2005). *Playing catch-up: How children born to teen mothers fare*. Washington, DC: The National Campaign to Prevent Teen Pregnancy.
- The National Campaign to Prevent Teen and Unplanned Pregnancy. (2013). Counting It Up: Key Data. Washington, DC. Accessed November 25, 2014: http://thenationalcampaign.org/sites/default/files/resource-primary-download/counting-it-up-key-data-2013-update.pdf
- Thompson, R. G., Jr., & Auslander, W. F. (2011). Substance use and mental health problems as predictors of HIV sexual risk behaviors among adolescents in foster care. *Health & Social Work*, 36, 33–43. http://dx.doi.org/10.1093/hsw/36.1.33
- Thompson, S. J., Bender, K. A., Lewis, C. M., & Watkins, R. (2008).
  Runaway and pregnant: Risk factors associated with pregnancy in a national sample of runaway/homeless female adolescents. *Journal of Adolescent Health*, 43, 125–132. http://dx.doi.org/10.1016/j.jadohealth.2007.12.015
- Wei, E. H., Loeber, R., & Stouthamer-Loeber, M. (2002). How many of the offspring born to teenage fathers are produced by repeated serious delinquents? *Criminal Behaviour and Mental Health*, 12, 83–98. http:// dx.doi.org/10.1002/cbm.488
- Whiteley, L. B., & Brown, L. K. (2010). Adolescent pregnancy and parenting. Current Psychiatry Reviews, 6, 269–279. http://dx.doi.org/ 10.2174/157340010793499378
- Williams, C., & Vines, S. W. (1999). Broken past, fragile future: Personal stories of high-risk adolescent mothers. *Journal of the Society of Pediatric Nurses*, *4*, 15–23. http://dx.doi.org/10.1111/j.1744-6155.1999.tb00076.x
- Wingood, G. M., & DiClemente, R. J. (2008). The ADAPT-ITT model: A novel method of adapting evidence-based HIV Interventions. *Journal of Acquired Immune Deficiency Syndromes*, 47 (Suppl), S40–S46. http://dx.doi.org/10.1097/QAI.0b013e3181605df1
- Woods, S. B., Farineau, H. M., & McWey, L. M. (2013). Physical health, mental health, and behaviour problems among early adolescents in foster care. *Child: Care, Health and Development, 39*, 220–227. http:// dx.doi.org/10.1111/j.1365-2214.2011.01357.x