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The Role of Parents and Families in Teen Pregnancy Prevention: An Analysis of Programs and Policies

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Abstract

Parent involvement (PI) is considered necessary in teen pregnancy prevention (TPP) and preventing other adolescent risk behaviors. However, controversy exists regarding the extent to which families are responsible for adolescent sexual decision making. We adapted two frameworks (Kirby's risk and protective factors and the Parent–Child Connectedness model) to examine parent- and family-based programs and policies relevant to TPP. There is evidence that PI is an important and effective component of TPP; however, the evidence for PI *programs* is less strong. Although the United States has legislated various PI-related policies in the context of adolescent sexuality, most have hindered the health of adolescents. Furthermore, the United States falls behind other Western industrialized nations when it comes to healthy family-based policies. PI in TPP is important; however, TPP requires multiple levels of intervention beyond the involvement of parents. We make recommendations for how various stakeholders can effectively use healthy family-based interventions in TPP.

Keywords

teen pregnancy prevention, parent involvement, sexuality education, family policies

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Introduction

Teen pregnancy is associated with a number of negative social and health outcomes to teen parents, their children, and, oftentimes, their parents, making teen pregnancy prevention (TPP) an important social priority. Teen parents are less likely to complete high school and their infants are at risk for low birth weight, behavior disorders, child abuse, future poverty, and school dropout (Hoffman, 2006). Additionally, the number of intergenerational households where a grandparent has sole custody has increased since the early 1990s (Fuller-Thomson, Minkler, & Driver, 1997), often exacerbating the economic disadvantage of already poor families (Minkler, 1999). Teen mothers are more likely to come from socioeconomically disadvantaged backgrounds. For example, teen pregnancy rates for African American and Latina women, ages 15 to 19 years, are almost double the rate for young White women (Guttmacher Institute, 2010; Kost & Henshaw, 2012), and young women of color are more likely to live in poverty (U.S. Census Bureau, 2011). This intersection between race, poverty, and health is particularly evident in urban areas, where there are often racially segregated neighborhoods and concentrated poverty (Fiscella & Williams, 2004).

Compared with other industrialized nations, the United States has the highest teen pregnancy rate (Cherlin, 2009; Darroch, Frost, & Singh, 2001). It is likely that this may be explained by differences in services, policies, and culture. Successful prevention efforts require a multilevel effort involving youth, parents, other trusted adults, schools, health professionals, and policy makers. Although there is need for parent involvement (PI), the role of parents and guardians in delaying pregnancy has been controversial due to debates around adolescent sexuality. Discourses about "family values" have often resulted in blocking health and human services professionals and sexuality educators from providing the information and services to youth that can protect their health. For example, despite progress made in reducing births and sexually transmitted infections (STIs) among adolescents since the early 1990s, adolescent births increased from 2005 to 2007; the annual rate of AIDS diagnosis among males nearly doubled in the past 10 years; and rates of syphilis have increased in recent years (Centers for Disease Control and Prevention, 2009). This public health syndemic has coincided with efforts by various socially conservative groups promoting abstinence only education (AOE) programs, which stress that adolescents postpone sex until marriage and that it is the responsibility of families, not schools, to educate youth about sex. By framing sex education as a private, family issue, comprehensive sex education (CSE) is often denied to American youth even though it has been shown to be effective at reducing sexual risk-taking and related negative social and health outcomes (Kirby, 2007). We argue that by mobilizing

Table 1. Parent and Family-Based Factors.

. . . that may be changed by social/health interventions	*. . . that are difficult to change with social/health interventions*
Family Attitudes/Modeling	
(+) Parent–child communication about sex and use of condoms or contraceptives, especially before initiation	(−) Mother's early age at first sex and first birth
(+) Parental disapproval of premarital sex/teen sex and parental acceptance and support of contraceptive use for sexually active teens	(−) Older sibling's early sexual behavior and early age at first birth
Family Dynamics	
(+) Parental supervision and monitoring	(−) Physical abuse, general maltreatment
(+) High-quality family interactions, connectedness, and satisfaction with relationship	(−) Household substance abuse
Family Structure	
	(+) Live with two parents
	(−) Family disruption
Socioeconomic Characteristics	
	(+) High level parental education
	(−) Low household income

Note. (−) refers to risk factor, (+) refers to protective factor.
Source. Adapted from Kirby, D. (2007). *Emerging answers 2007: Research findings on programs to reduce teen pregnancy and sexually transmitted diseases*. Washington, DC: National Campaign to Prevent Teen and Unintended Pregnancy.

around social conservative values, supporters of AOE have oversimplified the discourse on family involvement in adolescent sexuality.

Parent–child relationships affect the likelihood of sexual initiation, substance use, and depression among adolescents (Lezin, Rolleri, Bean, & Taylor, 2004). An analysis of the 1997 to 2003 National Longitudinal Survey of Youth found that cohesive family environments (e.g., communication, attachment, monitoring) reduce risky sexual behaviors (Manlove, Logan, Moore, & Ikramulla, 2008). Reflecting such evidence, Kirby's analysis of the literature concludes that there are risk factors and protective factors associated with PI and teen sexual behavior (Table 1; Kirby, 2007). These risk and protective factors are complex and overlapping, demonstrating the need to use a theoretical model based on multiple family-based factors when examining the role of families in adolescent health outcomes. However,

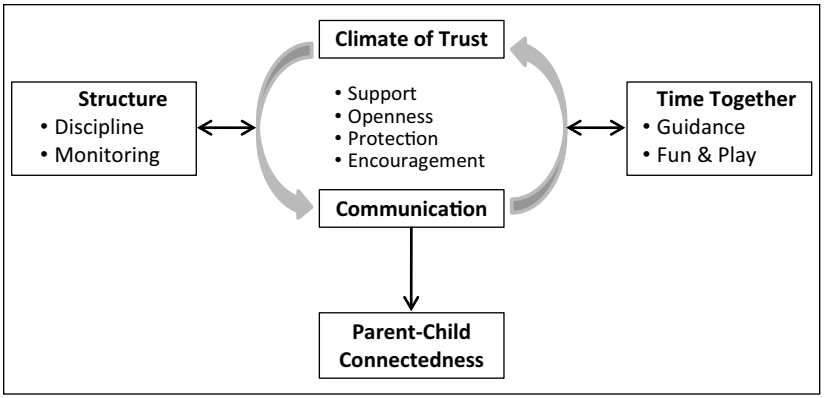

Figure 1. Parent Child Connectedness (PCC).
Source. From Lezin, N., Rolleri, L., Bean, S., & Taylor, J. (2004). *Parent Child Connectedness: Implications for research, interventions and positive impacts on adolescent health*. Santa Cruz, CA: ETR Associates.

most programs incorporating PI focus on only one protective factor, such as parental monitoring or communication. The Parent Child Connectedness (PCC) model provides a more holistic approach addressing the antecedents of adolescent behavior (Lezin et al., 2004). PCC is defined as "the quality of the emotional bond between parent and child and by the degree to which this bond is both mutual and sustained over time" (Lezin et al., 2004, p. 6). It incorporates constructs such as attachment/bonding, warmth/caring, cohesion, support/involvement, communication, monitoring/control, autonomy granting, and maternal/paternal characteristics (Figure 1).

Parental involvement in sex education and other sexual health efforts is important and necessary, but it is also complex and requires a nuanced understanding of family-related factors. By examining adolescent sexual health programs that incorporate PI as well as the related policy environment, we make recommendations for health and human services professionals to more comprehensively address the role of parents and families by using evidence-based programs and advocating for policies that more effectively promote sexual health.

Methodology

In this article, key characteristics of parent- and family-based programs and policies are synthesized using Kirby's analysis of risk and protective factors (Table 1) and the PCC model as our framework. As Kirby (2007) notes, some

factors are difficult to change using standard public health interventions (right column) whereas others may be more amenable to change (left column).[1] We argue that factors in the left column may be addressed by programs whereas those in the right may be influenced by policies and, over time, through secondary prevention (e.g., timing of mother's first birth). Programs and policies were identified through the following methods.

A literature search was conducted to identify programs that include PI.[2] We started with meta-analyses by Kirby (2007), Advocates for Youth (Alford, 2008), SIECUS (Sexuality Information and Education Council of the United States, 2002), and organizational websites such as the National Campaign to Prevent Teen and Unplanned Pregnancy (Albert & The National Campaign to Prevent Teen and Unplanned Pregnancy, 2010) and ETR Associates (ETR Associates, n.d.). We subsequently conducted a keyword search on PI strategies in adolescent sexual health and reviewed references cited in other studies. Inclusion criteria for this evidence-based analysis include the following: urban setting, experimental or quasi-experimental research design, sample size of at least 100, follow-up for at least 3 months, publication in a peer-reviewed journal, and findings that demonstrated a significant ($p < .05$) impact on sexual behavior, such as delay in sexual initiation and birth control use.

We used the right column of Table 1 as a guide for identifying relevant policies. Policies were identified using an Internet search engine, with special consideration to sexual health-related policy research organizations. Justification for policy inclusion was based on potential impact on teen pregnancy; they were categorized as health *promoting* or *hindering*. Finally, we examined related policies from other Western industrialized nations with lower teen pregnancy rates.

Results

Programs

A wide variety of PI-based TPP programs have been implemented. The scope of programs include wide-scale strategies, such as national observances (e.g., *Let's Talk Month*) or media campaigns; parent-only or parent–child community-, school-, clinic-, work-, and home-based programs; and dissemination of videos or written materials for families to use at home (Table 2; Alford, 2008; Kirby, 2007, 2008; Sexuality Information and Education Council of the United States, 2002). Most interventions, however, lack rigorous evaluations (Kirby, 2007). For those programs with rigorous evaluations, many have been shown to affect distal outcomes, such as communication, but few have been found to actually reduce sexual risk-taking

Table 2. Program Types, Examples, and Evidence for Impact.

Program type	Specific examples	Evidence regarding impact on adolescent behavior/attitudes
National observances	*National Family Sexuality Education Month, Let's Talk Month*	None
Media campaigns	*Talking with Kids about Tough Issues, Adults and Adolescents Talking*	None
Grassroots community organizing	*Plain Talk*	Weak evaluation design: ↓ **teen pregnancy rate**
Community- and school-based, multilevel	*Children's Aid Society, Project Connect, Project Straight Talk, School/Community Program for Sexual Risk Reduction Among Teens, Seattle Social Development Project*, etc.	Some strong designs but impact of parent involvement not evaluated on its own: ↓ **teen pregnancy rate**, ↑ **age of sexual initiation**, ↑ **condom use**
Community-based, parents only	Planned Parenthood *Adult Role Models (ARMs)*	Generally weak/evaluation of process outcomes, not behavior: Shown to be less effective than parent–child programs
Community-based, parent–child	*Growing Together, Keepin' it R.E.A.L.!, R.E.A.L. Men, Linking Lives, Familias Unidas, PATH, Parents Matter!*, etc.	Generally weak with some strong designs: ↑ **condom use**
Workplace-based, parents only	*Talking Parents, Healthy Teens*	One stronger study, but only evaluated process outcomes: ↑ **parents giving instructions for condom use**
School-based	Curriculum-based: *Reducing the Risk, Managing Pressures before Marriage*	Strong evaluation for curricula but parent involvement component usual includes process outcomes only: Curriculum: ↑ **age of sexual initiation**, ↓ **unprotected** sex. Homework assignments: ↑ **communication**
Daycare-based	*Abecedarian Project*	One strong design with TPP-based behavior outcomes, not process outcomes: ↓ **teen pregnancy rate**, ↑ **age of sexual initiation**
Clinic-based	*Linking Lives*	Currently under evaluation
Resources and services	Audiotapes, videos, newsletters	None
Home-based	*Nurse Family Partnership*	Have not assessed pregnancy of children, but there is evidence for other risky behaviors

among adolescents. Although some programs have shown success, the overall impact of PI programs has been weak to moderate.

Multicomponent Programs. Some multicomponent interventions that include PI have been found to be effective; however, the research often lacks evidence for the impact of the PI component itself (Table 3). Moreover, the role of parents varies considerably across these interventions. The *Abecedarian Project* was shown to have long-term impact on adolescent births and delaying first birth (Campbell, Ramey, Pungello, Fparling, & Miller-Johnson, 2002). *The Children's Aid Society's Carrera Program* was shown to delay reported sexual initiation, increase reported contraceptive use, and reduce reported pregnancy and birth rates for 3 years among girls in the program (Philliber, Kaye, Herrling, & West, 2002). *Reducing the Risk* was shown to increase reported parent–child communication about abstinence and contraception—especially among Latino youth—and delay initiation of sexual intercourse; reduce reported incidence of unprotected sex among lower risk youth; and increase reported use of contraception (Hubbard, Giese, & Rainey, 1998; Kirby, Barth, Leland, & Fetro, 1991). The *Seattle Social Development Project* was shown to delay reported initiation of sexual intercourse, reduce reported number of sexual partners, increase reported condom use, and reduce rates of teen pregnancy and birth (Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999; Lonczak, Abbott, Hawkins, Kosterman, & Catalano, 2002). Although promising, we cannot conclude that PI itself had a positive effect on these outcomes since these programs all involve multiple components. Only *Reducing the Risk* specifically measured PI in its evaluation and found that the program increases parent–child communication.

Another sex education curriculum, *Managing Pressures Before Marriage* (*MPM*), includes parent–child homework assignments. An evaluation of *MPM* found that it had a greater impact on distal outcomes among those who completed parent–child homework assignments, showing a dose–response effect. However, there were no significant effects on sexual behaviors, possibly because it used an AOE curriculum that we know to be ineffective (see *Policies* section; Blake, Simkin, Ledsky, Perkins, & Calabrese, 2001). Because of the dose–response relationship between homework assignments and improved PCC outcomes, it is promising that implementing parent–child homework assignments with fidelity could improve an evidence-based CSE curriculum like *Reducing the Risk*.

Stand-Alone Programs. Some stand-alone PI programs have been shown to positively affect communication (Kirby, 2008) and specific outcomes, such as parent–adolescent review of how to use a condom (Schuster et al., 2008),

Table 3. Impact of Evidence-Based Multicomponent Programs With Parent Involvement on Sexual Behaviors and Outcomes.

Program	Age of initiation	No. of sexual partners	Condom use	Use of contraception	Dual use of condoms and contraception	Unprotected sex	Teen pregnancy rate	Teen birth rate	Age of first birth	STD diagnosis
Abedecarian Project	—	—	—	—	—	—	—	↓	↑	—
Children's Aid Society Carrera Program	↑ (females only)	—	ns	ns	↑ (females only)	—	↓ (females only)	↓ (females only)	—	—
Reducing the Risk[a]	↑	—	—	↑	—	↓ (low risk, not sexually active)	ns	—	—	—
Seattle Social Development Project	↑	↓	↑	—	—	—	↓ (females only)	↓ (females only)	—	ns

Note. STD = sexually transmitted disease; ns = not significant; (—) indicates outcome not measured.
a.Significant finding in original study and separate replications for "age of initiation," significant finding for "use of contraception" in replication study.

Table 4. Impact of Evidence-Based Stand-Alone Parent Involvement Programs on Distal and Proximal Outcomes.

	PI-based distal outcomes			Proximal outcomes			
Program	Family functioning	Comfort talking about sex	Parent–child communication	Abstinence	Unsafe sex or sex without a condom	Condom use	Reported STI
Familias Unidas + Parent Preadolescent Training for HIV Prevention (PATH)	↑	—	↑[a]	—	↓	—	↓
Keepin' it R.E.A.L.!	—	↑	↑	ns	—	↑	—
Responsible, Empowered, Aware, Living (REAL) Men	—	—	↑	↑	↓	—	—

Note. PI = parent involvement; STI = sexually transmitted infection; ns = not significant; (—) indicates outcome not measured.
a.Included in the "family functioning" measure, along with: PI, family support, and positive parenting.

but few have reduced sexual risk-taking among adolescents (Table 4). *Familias Unidas + Parent-Preadolescent Training for HIV Prevention* (PATH) is a parent-centered intervention delivered to Latino adolescents and their primary caregivers. The program has been shown to improve family functioning and reduce reported incidence of unsafe sex and STI contraction (Prado et al., 2007). Prado et al. (2007) found that the effects of the program were partially mediated by improvements in family functioning. These findings suggest the importance of improving family functioning in preventing unsafe sex among adolescents. *Keepin' it REAL* is a mother–adolescent HIV prevention program, which was found to increase reported comfort talking about sex, parent–child communication, and condom use (DiIorio et al., 2006). *REAL Men*, an HIV prevention program designed for male adolescents, was shown to increase parent–child communication and abstinence and decrease incidence of sex without a condom (DiIorio, McCarty, Resnicow, Lehrl, & Denzmore, 2007).

Policies

We consider the larger policy environment in which adolescents and their families exist and highlight three categories: policies involving parents in adolescents' decisions regarding sexual behaviors, those that address family

Table 5. Health Promoting Versus Health Hindering Parent Involvement Policies.

Health promoting	Health hindering
Decision making around sexual behaviors	
• Comprehensive sex education policy	• Abstinence-only sex education policy
• Policies that allow for minors' right to consent to confidential health care	• Policies that require parent involvement in minors' access to sexual health services
Family connectedness	
• Family–work reconciliation policies	• PRWORA (Welfare Reform)
• Family violence prevention and treatment policies	• Harsh criminal justice policies
Broader policies that address family-based antecedents of teen pregnancy	
• Poverty reduction policies	• PRWORA (Welfare Reform)
Policies that address the relationship between education and social class	

connectedness, and broader policies that may address other family-based antecedents of adolescent sexual behavior. We categorized them into health *promoting* or *hindering* (Table 5).

Decision Making Around Sexual Behaviors: CSE Versus AOE. Parental involvement regarding adolescent sexual decision making has been at the forefront of political debate resulting in attempts to legislate parental action. One such area pertains to sexuality and health educational programs consisting of comprehensive sex or AOE.

Nationwide, the conservative family values movement has been effective in achieving AOE policy victories since the early 1980s, including the Adolescent Family Life Act (Title XX of the Public Health Service Act) in 1981 (U.S. Department of Health and Human Services, 2009) and the establishment of Section 510 under Title V of the "Welfare Reform" act of 1996 (i.e., a federal program to exclusively fund programs that teach AOE; U.S. Department of Health and Human Services, 2012). The assumptions behind AOE are that teaching adolescents about contraception may encourage sexual initiation, and it is the responsibility of parents (not schools or community-based organizations) to teach youth about sexuality. However, important fallacies underlie this logic. First, research shows that teaching teens about safer sex does not cause them to have sex (Kirby, 2007). Second, not all families are equipped to give their children medically accurate information about

sexuality and contraceptives. For example, if a parent lacks the knowledge, if a family environment is too unstable or unsafe, or if a family lacks the communication skills and comfort necessary to discuss sexuality, then parents will not be effective sexuality educators for their children.

AOE was an important policy in the Bush administration, evidenced by the $450 million allocated to it between 2000 and 2008 (Howell, 2007). To receive federal funding, states could not use these monies for programs that also provided CSE. In addition, states were required to match the federal funds, thus also diverting funding away from CSE programs. Although abstinence may be a healthy choice for youth and is the only 100% effective way to prevent pregnancies and STIs, teaching about abstinence only is less likely to prevent the consequences of unprotected sex.

To date, research has shown CSE to be more effective than AOE. Kohler, Manhart, and Leafferty's (2008) analysis of the National Survey of Family Growth found that adolescents who received CSE were significantly less likely to report teen pregnancy than those who received no formal sex education, whereas there was no significant effect of AOE programs. AOE did not reduce the likelihood of engaging in vaginal intercourse, but CSE was associated with a lower likelihood of reporting vaginal intercourse. Neither AOE nor CSE were found to significantly reduce the likelihood of reported STI diagnoses. Conversely, Mathematica Policy Research evaluated the impact of several AOE programs that met federal guidelines and found that they had no positive impact on sexual behavior. AOE recipients were no more likely to delay sexual initiation, to have fewer sex partners, or to use condoms or other contraceptives than nonrecipients (Trenholm et al., 2007). Furthermore, studies specifically examining teens who have taken virginity pledges have found that pledgers are just as likely to have sex as nonpledgers, but are less likely to use condoms or other forms of birth control (Bearman & Bruckner, 2001; Rosenbaum, 2009).

In addition, Kirby conducted a comprehensive meta-analysis of prevention programs for adolescents analyzing experimental and quasi-experimental studies with rigorous designs (Kirby, 2007). Among the numerous AOE programs examined (aside from the Mathematica studies), Kirby found only one other rigorous study of an AOE program, and it did not have any impact on initiation of sex, abstinence, number of sexual partners, use of condoms, or use of contraception. Kirby found one program to be related to significant increases in rates of pregnancy and STIs. One program with less rigorous evidence was found to have a modest delay on the initiation of sex, and there was also modest evidence for two abstinence programs helping youth return to abstinence or reduce number of sexual partners. Overall, Kirby concludes that to date, "well-designed studies of abstinence-until-marriage programs

have consistently found no significant impact on sexual behavior" (Kirby, 2007, p. 180).

With respect to CSE programs, Kirby found that 47% of programs delayed the initiation of sex, none hastened it; 29% reduced the frequency of sex or increased return to abstinence, none increased the frequency of sex; 46% reduced the number of sexual partners, and one increased the number (the only negative finding out of 78 results for measures of sexual behavior). Forty-seven percent found increased condom use; 44% found increased contraceptive use, and one found decreased use; 63% showed a reduction in unprotected sex. Overall, 69% found reduced risky sexual behavior by improving one or more types of behavior, with 38% improving two or more types of behavior. In terms of long-term effects: 25% found a significant reduction in teen pregnancy rates, one reported a significant decrease in birth rates, and one third saw significant reductions in rates of STIs. Overall, Kirby concluded that some CSE programs have produced strong evidence that they reduce sexual risk-taking by delaying sexual initiation, reducing frequency of sex, increasing use of condoms and other forms of birth control, or reducing number of sexual partners (Kirby, 2007).

In light of these research findings, policies promoting parental involvement in adolescent sexual decision making via AOE or CSE programs can be considered health hindering and health promoting, respectively. Statewide surveys indicate that the vast majority of parents support CSE over AOE across racial/ethnic, religious, political, economic, and educational subgroups (Bleakley, Hennessy, & Fishbein, 2006; Constantine, Jerman, & Huang, 2007; Eisenberg, Bernat, Bearinger, & Resnick, 2008; Ito et al., 2006). However, these programs are not reaching the majority of youth. Only 20 states plus D.C. currently mandate schools to teach both sex and HIV education. Although 26 of 37 states mandating abstinence education require that it be stressed, only 18 states and D.C. mandate that programs include information on contraception; none require that it be stressed (Guttmacher Institute, 2012a). We do not know how many schools use curricula with PI; however, all the states that provide some sex education and HIV/AIDS prevention require active or passive (i.e., opt-out) parental consent for a student's participation.

Parental Notification. Another example of the relationship between PI and adolescents' decision making pertaining to sexual behaviors is policy that requires PI (i.e., notification or consent) in adolescents' access to contraceptives, emergency contraception, or abortion versus minor's rights to receive confidential health care. For instance, 25 states and D.C. allow minors' consent to contraceptive services, 21 states allow only certain categories of

minors to consent, and 4 states have no relevant policy or case law. Eighteen of these states allow doctors to inform a minor's parents that he or she is seeking STI services. Additionally, 36 states require some form of PI in minors' decisions to have an abortion, whereas other states provide alternatives, such as minors' right to consent (only 3 states and D.C.) or with consent from a trusted adult (Guttmacher Institute, 2012b).

The argument for PI policies is that parents should be a part of adolescents' decision making around sexual behaviors and health care and requiring PI could deter youth participation in risky behaviors. This logic fails adolescents in three ways. First, parental notification may serve as a barrier to adolescents' access to health services given that most families struggle with talking openly about sexuality (Deptula, Henry, & Schoeny, 2010; Henry J. Kaiser Family Foundation, 2002; Levine, 2011). In fact, many argue that it is a natural part of adolescent development for youth to become independent from their parents and communicate with them less (Shtarkshall, Santelli, & Hirsch, 2007). Finally, this presents teens confronting challenging situations, for example, living in unstable or abusive families or needing to access contraception, STI and other services, with either being forced into having conversations under difficult family circumstances or unable to receive the care they need (Tillett, 2005; Valvano, 2009).

Second, these policies may deter adolescents from accessing reproductive health care but not necessarily from having sex. As exemplified through the case of AOE, denying adolescents the knowledge to protect themselves does not prevent them from having sex; it prevents them from having safer sex. Third, these policies do not prevent teen pregnancy. A report analyzing existing literature on the impact of PI policies found that they have very little impact on abortion rates, they compromise adolescents' health by delaying care, and they may lead to more teen births (Dennis, Henshaw, Joyce, Finer, & Blanchard, 2009).

Family Connectedness. Perspectives regarding "the family" play an important role in shaping policies that may affect adolescents' access to sexual health information and services. U.S. approaches to include families in this domain are often narrow, lacking both support for and attention to family involvement. Other Western industrialized nations model more holistic family-based policies (also referred to as "work–family reconciliation efforts") that create opportunities for greater parental involvement in children's lives and, ultimately, their sexual education and decision making (Chavkin & Johnson, 2007). In responding to the increased number of women in the workforce, the purpose of these policies (endorsed by the EU, OECD, and the UN) is to support families' simultaneous goals of parenting and employment. An

understanding of these policies is important to the discussion of delaying sexual activity because we know that parents who spend time with their children—for bonding and to monitor their behavior—may foster an atmosphere of open communication, which has been shown to have a positive impact on adolescent risk behaviors (Lezin et al., 2004). It is probably not coincidental that nations that do a better job supporting families have lower rates of teen pregnancy and birth (Cherlin, 2009; Darroch et al., 2001).

Examples of work–family reconciliation policies include paid maternity and paternity leave, paid sick days, universal cash allowances, and assistance with child care. Paid maternity (and sometimes paternity) leave for working mothers is mandated in many wealthy nations, including Sweden, Great Britain, France, and Canada (Darroch et al., 2001; Ray, Gornick, & Schmitt, 2009). In the United States, the Family and Medical Leave Act guarantees that a mother may return to her job after maternity leave, but *paid* leave is rare and often depends on the size of the employer. The working poor are less likely to have access to employer-based benefits (S. J. Heymann & Earle, 1998; Palley & Shdaimah, 2011).

Paid maternity leave could potentially lower teen pregnancy rates from both primary and secondary prevention perspectives. One analysis of such policies concludes that they delay childbirth among adolescents by allowing young women to attain their professional goals. Given that future goals are important in TPP (Kirby, 2007), maternity leave policies may provide adolescents with a realistic model for balancing parenting with employment. By supporting new mothers and fathers in bonding with their children, these policies support the establishment of close families, which may be a protective factor in pregnancy prevention in the next generation (Kirby, 2007; Lezin et al., 2004). On a related note, parents need to be able to care for themselves and their children when they are sick. The United States is the only wealthy nation that does not require a minimum amount of sick and vacation days for workers. In fact, nearly half of full-time private sector workers in the United States have no paid sick leave (J. Heymann, Earle, Simmons, Breslow, & Kuenhnhoff, 2004; J. Heymann, Rho, Schmitt, & Earle, 2010; Lovell, 2004).

Within the family, physical abuse and general maltreatment are risk factors for teen pregnancy (Kirby, 2007). Family violence policies include prevention of and responses to physical, emotional, and sexual abuse. The Violence Against Women Act of 2005 uses a comprehensive approach, including helping children exposed to violence, providing crisis services, improving law enforcement, health care provider training to support victims, and violence prevention education to males (U.S. Department of Justice & Office of Violence Against Women, 2009). The Keeping Children and Families Safe Act of 2003 reauthorized the Child Abuse Prevention and Treatment Act, which helps states improve practices in both preventing and treating child

abuse and neglect (National Association of Social Workers, 2003). Although implementation of such policies is not perfect and violence prevention requires a long-term, multilevel effort, these policies are important for promoting healthy families.

Although other Western industrialized nations have established family policies that may play a role in TPP (including social welfare programs), the United States has used a different strategy. American social policies concerning subsidies often mirror cultural values about individual responsibility, discouraging families from seeking public support. One example is the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which replaced the means-tested cash assistance program, Aid to Families with Dependent Children, with the time-delimited program, Temporary Assistance for Needy Families (TANF). TANF attempted to promote "responsibility" by eliminating the cash entitlement for the poor, enacting mandatory work requirements, instituting a 5-year lifetime time limit, limiting assistance to minors, and officially promoting marriage as a strategy to end welfare dependence. The logic behind TANF runs very much counter to work–family reconciliation efforts. Rather than a universal program to *support* parenting, TANF is available to only poor mothers (who, in approximately half the states, will be sanctioned if they have a child; Romero, 2006; Romero & Agenor, 2009).

Many TANF components are relevant to PI. For example, by limiting assistance to teen parents, TANF encourages their continued support by their parents, placing an economic burden on low-incomes families (Levin-Epstein & Schwartz, 2005; Minkler, 1999). By promoting marriage as a solution to poverty, TANF ignores the structural factors that are at the root of poverty and places marriage above healthy relationships. Some worry that marriage promotion may pressure women to stay in abusive relationships, harming women and children (Catlett & Artis, 2004; Struening, 2007). Work requirements for single mothers replaces time spent with their children with low-wage positions unlikely to provide benefits (Chavkin, 1999; London, Scott, Edin, & Hunter, 2004). Work requirements are generally unsuccessful at lifting families out of poverty and have made it difficult for mothers to care for their infants and develop the early bonding essential to PCC.

The United States has the highest incarceration rate in the world (International Centre for Prison Studies, n.d.), and current criminal justice policies disproportionately affect low-income, racially segregated communities in urban areas (Mauer & King, 2007). Harsh policies, such as "zero tolerance" and drug laws, have led to increased incarceration rates for low-level, nonviolent offenders, further weakening disadvantaged families and communities (J. Moore, 1996; L. D. Moore & Elkavich, 2008). These policies have not been shown to reduce incarceration or recidivism, unlike some alternative-to-incarceration programs,

which have also reduced criminal justice-related costs through education, training, and community service of low-level offenders (CASES, 2009). Policies that incarcerate fathers and mothers limit children's connections to their parents and negate the importance of family involvement in disadvantaged communities (Geller, Garfinkel, Cooper, & Mincy, 2009; Gradess, 2000; L. D. Moore & Elkavich, 2008).

Broader Policies That Address Family-Based Antecedents of Teen Pregnancy. There are other family-based risk factors for teen pregnancy that operate beyond the scope of parent–child interactions (Table 1), such as parents' education level. Although socioeconomic status is not explicitly listed as a family-based risk factor, we include it in this analysis because it undoubtedly shapes the capacity of family support and is a known risk factor for early pregnancy.

Internationally, wealthy countries have attempted to reduce poverty through social welfare policies; however, cross-national studies of welfare policies have shown that U.S. social welfare programs are comparatively ineffective at reducing poverty (Gornick & Jäntti, 2010; Kenworthy, 1999; Moller, Huber, Stephens, Bradley, & Nielsen, 2003). Redistributive policies have been shown to do a better job at reducing poverty, but welfare policy in the United States has resisted providing entitlements and has relatively tighter restrictions on eligibility for cash assistance.

Since parents' educational level is usually shaped before childrearing, education-based interventions must be examined in the context of how parenting and education might interact. Specifically, parental occupation (e.g., managerial work vs. service work) can affect how parents bring their children into a culture of learning. One review of this literature (Rothstein, 2004) suggested how parents with particular kinds of occupations may approach childrearing in different ways. For example, those whose work involves authority and responsibility might have a greater sense of self-efficacy, which might be expressed in their childrearing. As such, they may allow their children greater ability to negotiate choices (e.g., what to wear or eat). Alternatively, parents whose jobs entail less autonomy might be more likely to teach their children to follow directions. This is just one way in which parental occupational differences may be viewed as resulting in different parenting influences on children's modes of learning and educational experiences.

Discussion

The relationship between culture and sexuality is important yet complex. Compared with other wealthy nations, cultural norms in the United States are less open and supportive about sexual behavior among adolescents: 84% to

94% of people in Canada, Great Britain, and Sweden are accepting of sex before marriage compared with 59% of Americans (Darroch et al., 2001), yet 75% of never-married 20-year-olds in the United States report having had sex (Finer, 2007). Clear information about sexuality and prevention messages is important in delaying pregnancy, yet the gap between U.S. attitudes and behaviors speaks to the mixed messages that American culture conveys to youth. The connection between social norms around sexuality and teen pregnancy shapes the environment in which parents and children feel comfortable (or not) discussing sexuality. Any programmatic or policy-based intervention to facilitate parent–child openness pertaining to sexuality must consider the larger social and cultural context.

There are some limitations to our methodology. For the purpose of this analysis, we examine parents/families. Although we include legal guardians, the scope of our analysis does not allow us to examine the complexities of some family structures, especially those that are more dynamic. It is likely that the programs selected for review demonstrate publication bias. First, programs with positive outcomes are more likely to be published in the literature and, given the objective of this article, only those with favorable results were reviewed. Second, rigorous evaluations are costly, which may mean that programs reported in the literature are not a comprehensive accounting of all programs that have been implemented. Given that the policy environment is complex (e.g., national, state, and municipal levels as well as school and other institutional settings), the scope of this research project did not permit us to consider *all* related policies.

PI should be integrated into broader programs until researchers find better evidence for more targeted parent-based interventions. Organizations that involve parents should apply the findings of this analysis into their current and future work. One way in which this may take place is by building on evidence-based programs. The CDC's "Getting to Outcomes" guidelines recommend that programs be based on one or two existing programs that have been shown to work (White et al., 2008; see Table 3). More generally, programs should use a holistic model (e.g., PCC) to address multiple, intersecting family-based factors; target parents of preadolescents; and reach parents and youth where they are (e.g., via workplace-based or parent-child homework assignment strategies). Programs should encourage parents to communicate clear and consistent messages to their children; not only about sexual risk taking (i.e., abstinence, contraceptive use) but also about setting long-term goals (i.e., career, income, relationship, children) to encourage healthy decision making and to emphasize the need for long-term, sustainable connections. Activities should include those that are skills-based, including role-playing, and allow opportunities for parents and children to practice PCC skills.

An *individual* family-based approach may ignore other important social factors that shape adolescent behavior. As such, health and human services professionals should frame their support for PI in TPP through advocacy for *healthy, family-based policy.* Early family connections should be supported for all via family–work reconciliation efforts; youth should be given accurate information about sexual health and should be encouraged to talk to their parents about sexuality through age-appropriate CSE; and minors must have full access to reproductive health care. Advocates should also tackle structural factors through policies that reduce poverty and those that address the relationship between education and social class.

A wide variety of programs and policies have been implemented that address PI as it relates to teen pregnancy. There is evidence that PI *itself* is important and effective in TPP; however, the evidence for PI *programs* is less strong. Essentially, parents and families are important but teen pregnancy is complicated and requires multiple levels of intervention. While policies that help adolescents communicate with their parents about sexuality are promising, policies that force parent–child communication about sexual health could, alternately, be harmful to the health of youth. In terms of family connectedness, the United States falls behind other Western industrial countries in creating policies that support parenting and employment. As such, international models provide promising examples of how policy can be used to better support families and family connectedness. These findings suggest that public health and other professionals should integrate parent- and family-based risk and protective factors into their work through programs and policy advocacy that support healthy family connections, while pushing for more positive messages about sexuality.

Given the contribution of structural analyses that point to the influence of social and economic conditions on families, several distal factors related to income inequality should receive attention, including the following: (a) raising the minimum wage and strengthening labor laws; (b) expanding early childhood education, after-school, and summer programs for low-income children to address educational gaps; (c) improving Section 8 (i.e., subsidized) housing and changing zoning laws to address segregated neighborhoods; and (d) eliminating barriers to social safety-net programs and establishing or strengthening school- and community-based clinics to serve both children and their parents to target health inequities. Due to socioeconomic factors underlying both adolescent sexual behavior and PCC, reproductive health advocates must look *beyond* direct family- and sexual health-based policy to address adolescent sexual risk (e.g., labor policy, education policy, after-school programs, etc.). Overall, many conservative-driven health and social policies (e.g., AOE; welfare) in the

United States have not only failed to improve the overall well-being of disadvantaged populations but have also hindered the health of adolescents and families.

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Notes

1. It should be noted that the feasibility of changing the first group of factors is influenced by the presence of any risk factors in the second group.
2. A preliminary phase of this research was conducted by the primary author for an earlier project at the NYC Department of Health and Mental Hygiene in the Bureau of Maternal, Infant and Reproductive Health and the Bronx District Public Health Office.

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