

# Childhood Sexual Abuse and Teen Pregnancy

## A WHITE PAPER

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**September 2007**

# OVERVIEW

Pregnancy rates among adolescent females have fallen steadily since 1990, from 116.9 pregnancies per 1,000 women aged 15-19 in 1990 to 75.4 pregnancies per 1,000 female teens the same age in 2002. Teens aged 15 to 17 experienced a decline in pregnancy rates of more than thirty percent, from 74.2 pregnancies per 1,000 in 1990 to 42.3 pregnancies per 1,000 in 2002. The rates for teens aged 18 to 19 also declined between 1990 (172.4 per 1,000) and 2002 (125.6 per 1,000).<sup>37</sup> While the teen pregnancy rate has significantly declined since 1990, the United States continues to have a higher teen pregnancy rate than many countries in the western industrialized world. For example, data collected in the mid-nineties from 46 developed countries indicate that the teen pregnancy rate in the U.S. is higher than all but one of the countries examined, and is more than four times the rate in Germany, France, Italy, and Spain.<sup>73</sup> Moreover, the teen birth rate in the U.S. in 2002 was more than double the rate for Canada.<sup>2</sup>

Regardless of the declines, teen pregnancy continues to be a serious problem that carries significant social costs for the teenagers, their children and society.<sup>52</sup> Teen mothers are more likely than other young women their age to drop out of school, live in poverty and rely on public assistance,<sup>52,56</sup> and their children tend to grow up in economically and educationally disadvantaged households.<sup>79</sup> Consequently, it is important that teen pregnancy prevention efforts address the numerous factors linked to the experience of a pregnancy. One such factor is childhood sexual abuse, for which some evidence exists to suggest a significant association with adolescent pregnancy and childbearing.<sup>5,6,17,29,41,58,59,61,64,72</sup>

## Definition of and trends in childhood sexual abuse

The Children's Bureau defines childhood sexual abuse as "a type of maltreatment that refers to the involvement of the child in sexual activity to provide sexual gratification or financial benefit to the perpetrator, including contacts for sexual purposes, molestation, statutory rape, prostitution, pornography, exposure, incest, or other sexually exploitative activities."<sup>83</sup> In general, child sexual abuse refers to sexual acts, sexually motivated behaviors, or sexual exploitation involving children, including both touching and non-touching offenses involving varying degrees of violence.<sup>34</sup> According to the National Child Abuse and Neglect Data System (NCANDS) of the Children's Bureau, of the estimated 899,000 children determined by Child Protection Services to be victims of maltreatment in 2005, 9.3 percent (or approximately 83,000 children) were sexually abused.<sup>84</sup> Among children who had been victims of maltreatment, a higher percentage of white victims (9%) had been sexually abused as compared with Hispanic (7%) and African-American (6%) victims.<sup>84</sup> Reported cases of child sexual abuse steadily rose throughout the 1980s to a peak of 149,800 substantiated cases in 1992, dropped throughout the rest of the 1990s,<sup>89</sup> and declined by a total of 49% by 2004.<sup>28</sup> Reported cases of sexual assault among teenagers also decreased by 67% from 1993 through 2004.<sup>28</sup> These statistics may reflect either an actual decline in the incidence of child sexual abuse due to public awareness or other factors, stricter laws against child abusers, or they could simply reflect a lower incidence of reporting or substantiation of cases.<sup>28,89</sup> The rate of childhood sexual abuse (1.2 per 1,000 children younger than age 18) remained constant between 2000 and 2004, while the number of victims fluctuated between 84,398 and 88,688 during this period.<sup>83</sup> The NCANDS collects case-level data on all children who received an investigation or assessment by a Child Protective Services (CPS) agency.<sup>84</sup>

However, because not all sexual abuse cases are reported, other research suggests that rates of childhood sexual abuse are actually much higher.<sup>4</sup> Survey data, which measure the number of people who report that they have ever experienced abuse (as opposed to those who have had an experience of abuse that was reported to and substantiated by a CPS agency), show high levels of childhood sexual abuse. For example, data from the Adverse Childhood Experiences Study in 1995-1997, a survey of more than 17,000 adult

members of a large health care organization, show that 21% of those surveyed, including 25% of women and 16% of men, reported ever having experienced sexual abuse as children.<sup>19</sup> The higher retrospective reporting of childhood sexual abuse in survey data compared with data collected by CPS agencies may be due, in part, to different definitions of childhood sexual abuse and the fact that respondents in surveys report retrospectively across their full childhood history compared with annual estimates in CPS data. However, the much higher incidence of childhood sexual abuse reported in surveys suggests that a high percentage of these experiences are never reported.

## Conceptual framework

The negative effects of sexual abuse on children are broad and include injury, disease, fear, anxiety, depression, anger, hostility, inappropriate sexual behavior, poor self-esteem, substance abuse, and difficulty with close relationships.<sup>21</sup> Not only do victims of abuse experience immediate negative effects, but victims who experience sexual abuse during childhood may be vulnerable to negative outcomes in the years following abuse,<sup>25</sup> including post-traumatic stress symptoms, substance abuse, gynecological complications, sexually transmitted diseases and unintended pregnancy.<sup>9,10,16,24,43,55,80</sup> This literature review focuses specifically on the link between childhood sexual abuse and teen pregnancy and childbearing.

Childhood sexual abuse is hypothesized to be a risk factor for adolescent pregnancy through both direct and indirect associations. First, sexual abuse has been argued to be directly associated with teenage pregnancy in both retrospective studies in which teens report both sexual abuse experiences and teen pregnancy<sup>5,6,16,17,29,38,39,41,45,58,59,61,64,65,72</sup> and in prospective studies following victims of abuse over time.<sup>27,39,59,65</sup> Second, sexual abuse has also been found to be indirectly associated with teen pregnancy, operating through sexual risk behaviors that may explain some of the association with teen pregnancy. Numerous studies indicate that experiencing sexual abuse is associated with early initiation of sexual activity, failure to use contraception, multiple sexual partners, substance use and abuse, and other risk factors, all which are associated with a higher likelihood of experiencing a teen pregnancy.<sup>47</sup> Therefore, an assessment of the link between childhood sexual abuse and teen pregnancy should examine both direct and indirect pathways.

## Purpose of this literature review

The purpose of this literature review is to examine the relationship between childhood sexual abuse and teen pregnancy by addressing four specific research questions: 1) What is the link or correlation between childhood sexual abuse and teen pregnancy?; 2) Is childhood sexual abuse an underlying causal factor of teen pregnancy?; 3) How do research findings differ across various groups, and for which subpopulations and target groups is the research most sparse?; and 4) What factors mediate the relationship between childhood sexual abuse and teen pregnancy? To do this, we identified the most relevant, methodologically and analytically-sound articles we could find that address our research questions. We rely mainly on multivariate studies, but report some bivariate findings that we found to be particularly salient. (We have indicated in the text if a certain finding was based on bivariate studies only.) While we focus our examination on articles published between 2000 and 2006, we also include a number of strong articles published prior to 2000 that we consider to make important contributions to this area of study. To examine what is known about the important mediators between childhood sexual abuse and teen pregnancy, we identified a number of studies that analyze the association between childhood sexual abuse and outcomes known to be significantly associated with the experience of a teen pregnancy (e.g., age at first sex, number of sexual partners, contraceptive use, substance abuse, and mental health).

This literature review examining the relationship between childhood sexual abuse and teen pregnancy is important for a number of reasons. First, practitioners have identified childhood sexual abuse and its relationship with teen pregnancy as a critical issue in the field of teen pregnancy prevention and reproductive health, and this report provides up-to-date information on the current state of the research. Second, the attention we give to mediating factors is of key importance because they represent potential areas of intervention for programs. Finally, we summarize what we do *not* know about this issue and provide possible directions for future research. This comprehensive summary of research on the relationship between childhood sexual abuse and teen pregnancy will serve as important background information for practitioners in the field of teen pregnancy prevention.

## WHAT EXISTING RESEARCH TELLS US

### Child sexual abuse and teen pregnancy

In their 2002 literature review on the association between child maltreatment and teen pregnancy, Blinn-Pike, et al. described 15 studies published after 1989 that examine this relationship.<sup>11</sup> While the authors searched for articles that examined the consequences of all types of child abuse, they found that most work on this subject addressed sexual abuse while relatively few studies addressed nonsexual abuse. They found that, while many studies did find a positive association between child abuse and teen pregnancy, too many were methodologically flawed, lacked a theoretical focus, or did not adequately account for potential confounding factors for the authors to conclude that a causal link exists.<sup>11</sup> For example, the authors suggest that future research more thoroughly apply existing theoretical models from a diverse set of disciplines to the study of the mechanisms through which abuse may be linked to teen pregnancy, in order to help programs and policy-makers address the problems of abuse and teenage pregnancy. Our literature review expands upon their work by including additional, more recent articles and exploring in greater detail the link between childhood sexual abuse and teenage pregnancy and its mediators. Furthermore, our review focuses on child sexual abuse specifically, instead of child abuse more broadly. The studies examined in our review link a teenage pregnancy to many different forms of sexual abuse, including forced sex,<sup>58,72</sup> nonconsensual sexual contact,<sup>29,61,64</sup> sexual experience with an adult,<sup>41</sup> events that the respondent considered to be sexual abuse,<sup>63</sup> any kind of sexual touching,<sup>44</sup> and substantiated incidents of sexual abuse reported to protection services agencies.<sup>59,81,87</sup>

Our review of the literature reveals that childhood sexual abuse and teen pregnancy have been found to be significantly and positively associated in a number of bivariate<sup>38,39,45</sup> and multivariate studies.<sup>5,6,16,17,29,41,58,59,61,64,65,72</sup> Only a few studies, however, have used prospective, longitudinal data in the analysis of the relationship between child sexual abuse and adolescent pregnancy.<sup>27,39,59,65,87</sup> A prospective study measures exposure (e.g. experience of sexual abuse) in a sample of individuals and then follows the individuals forward in time, monitoring possible outcomes (e.g. teen pregnancy). Prospective studies are methodologically strong as they allow researchers to tease out causal relationships by controlling for confounding factors assessed prior to the abuse and because recall error and distortion are minimized.<sup>87</sup> The balance of evidence from these prospective studies reveals a positive association between childhood sexual abuse and teen pregnancy,<sup>27,39,59,65</sup> although one study<sup>87</sup> indicates no association between sex abuse and teen pregnancy. The remaining studies use retrospective and cross-sectional data, which operate in reverse of prospective studies by examining exposure to a suspected risk factor in relation to an outcome already established at the beginning of the study. Prospective studies, when conducted with rigor, can be helpful for determining causality. In general, it is much more challenging to assess associations using retrospective studies because data are usually collected at one point in time.<sup>87</sup> However, given the nature of socio-behavioral research, researchers are often limited to using a retrospective design. A limitation of both types

of studies is that many use small convenience samples or samples with higher than average reports of child maltreatment.<sup>25,87</sup> Nonetheless, retrospective studies offer important insights into the association between childhood sexual abuse and teen pregnancy. The majority of these retrospective studies point to a positive association between childhood sexual abuse and teen pregnancy,<sup>5,6,17,29,38,41,45,58,61,64,72</sup> whereas only a few have found no link between sexual abuse and teen pregnancy.<sup>3,16,75</sup>

Findings from retrospective studies indicate that any type of sexual abuse may be associated with teen pregnancy and, furthermore, that particular details of child abuse experiences matter, such as age at which abuse occurs, the identity of the perpetrator, severity of the abuse, and the use of violence or force. For example, males who are younger when they experience sexual abuse have a higher risk of subsequently impregnating a teenager,<sup>6</sup> and females who are younger when abuse occurs tend to be younger at their first pregnancy, as compared to males and females who were older when they experience sexual abuse.<sup>44</sup> Females who have been sexually abused by a boyfriend are at an increased risk of a teen pregnancy, but the same is not true for those who were sexually abused by a friend, family member, or stranger.<sup>67</sup> More severe forms of abuse (e.g., rape or incest) are related to a greater risk of teen pregnancy as compared with less severe forms of abuse (e.g., unwanted sexual touching or attempted rape).<sup>45,69</sup> The use of force or threats during an incident of sexual abuse appears to be particularly traumatic, as males who experience sexual abuse accompanied by threats or violence from the perpetrator show an increased risk of impregnating a teenager compared to those whose abuse was not accompanied by threats of violence.<sup>6</sup>

Not all studies distinguish sexual abuse from other types of child abuse; instead, research has shown that child abuse in general,<sup>81</sup> and the number of types of abuse experiences, are positively associated with the risk of teen pregnancy.<sup>41,69</sup> However, one study found that while experiencing any type of abuse (sexual, emotional, or physical) is associated with teen pregnancy, when the types of abuse are analyzed separately, only physical abuse is still associated with teen pregnancy.<sup>3</sup> It is important to note, however, that this study's sample included only 100 females in a geographically limited area.<sup>3</sup>

Researchers have offered numerous explanations for the relationship between childhood sexual abuse and teen pregnancy. Some have suggested that pregnancies are planned by abused girls to free themselves from a bad family situation,<sup>13</sup> while others have argued that experiencing sexual abuse as a child socializes teens to form distorted views of sex, such as having higher levels of preoccupation with sex, or feelings of ambivalence or aversions to sex, in adolescence that cause them to engage in more high-risk sexual behaviors.<sup>29,59</sup> Abuse in childhood can be seen as a traumatic experience that affects healthy social development into adolescence,<sup>13,75</sup> or one that leads to feelings of low self-esteem for which having a child of one's own may compensate.<sup>59,63</sup> Furthermore, pregnancy could be a direct result of unwanted intercourse, and one study found that this was the case for 13% of the pregnant or parenting teens in their sample of mostly low-income Hispanic females recruited from a parenting teen program in San Antonio, Texas.<sup>44</sup>

For the small number of studies that found no relationship between childhood sexual abuse and teen pregnancy, the authors suggest that their findings could be due to the characteristics or size of the sample.<sup>3,16,75</sup> Others argue that sexual abuse does not emerge as a particularly salient predictor of teen pregnancy because it is not one type of abuse alone, but rather an accumulation of negative family experiences and all types of abuse, that leads to negative consequences later in life.<sup>75,87</sup> Moreover, some suggest that confounding factors explain the relationship that others have found between child abuse and pregnancy because other experiences, such as sexual history, family structure, and disadvantage, better predict teen pregnancy than sexual abuse experience.<sup>87</sup>

Overall, our review of the literature exposes a weakness in the research on the relationship between childhood sexual abuse and teen pregnancy by revealing that most of the data used in the studies are retro-

spective and cross-sectional in nature.<sup>3,5,6,16,17,29,38,41,45,58,61,64,72,75</sup> As such, it is difficult to establish a causal relationship between sexual abuse and teen pregnancy. Prospective study designs can provide more evidence for establishing causality, yet only a few studies have used longitudinal, prospective data in their analyses.<sup>27,39,59,65,87</sup> On balance, most of the existing studies do suggest a significant association between sexual abuse and teen pregnancy, but more prospective studies are needed to better understand the complex relationship between sexual abuse and subsequent teen pregnancy. However, although we cannot definitively conclude that sexual abuse is a causal predictor of teen pregnancy, it is clear by the findings summarized above that experiencing childhood sexual abuse is, at minimum, an important *marker* in the experience of adolescent pregnancy, and it likely contributes to a constellation of risk factors that increases the likelihood of adolescent pregnancy.

## Subgroup findings

Whereas some studies that conducted analyses for males and females separately find that sexual abuse and teen pregnancy are positively associated for both groups,<sup>64,69</sup> some evidence exists from both a small, longitudinal bivariate study and a larger, cross-sectional multivariate study that child sexual abuse is a stronger risk factor for teen pregnancy among males than females.<sup>39,69</sup> Saewyc, et al. (2004), offer two explanations for this finding: first, males experiencing abuse often report more dysfunctional family environments compared to females, which may lead to lower levels of support for males following sexual abuse; second, males could be more concerned with adhering to a cultural perception of masculinity and feel a sense of emasculation following sexual abuse.<sup>69</sup> Thus, fathering a child could be a means of restoring masculinity.<sup>69</sup> Alternatively, since many sexual abuse perpetrators are men, one study hypothesizes that male children who have been abused may be more likely to have been abused by males, and thus have to cope with sexual identity issues in addition to the sexual abuse experience.<sup>69</sup> These findings suggest that the research literature's focus on female teenage parents may obscure consequences for male victims of sexual abuse.<sup>39</sup> The potential heightened consequences of sexual abuse for males highlight the need for more pregnancy prevention programs to target both male and female victims of sexual abuse.<sup>69</sup>

The association between childhood sexual abuse and teenage pregnancy may also vary between racial/ethnic groups, although we found only one study that explicitly tested this association and it used bivariate analyses. The authors found that experiencing rape (the woman was forced to have sex) has a greater association with risk of a teen pregnancy for white women than for other women, whereas being coerced into having sex (the woman was pressured in some other way to have sex) has a greater association with the risk of pregnancy for minority women (Mexican-American, African-American, and American-Indian) as compared with white women.<sup>45</sup> The authors suggest further research to explore racial/ethnic differences in the association between forced sex, rape, and teen pregnancy. In addition, although not specifically testing differences across racial/ethnic groups, studies using samples of low-income African Americans,<sup>29</sup> Hispanics<sup>44</sup> or of at-risk street youth<sup>38</sup> have found an association between sexual abuse and teen pregnancy among these populations.

There are other subpopulations of interest for which research is lacking. For example, we could not find any studies that examined whether the relationship between childhood sexual abuse and teen pregnancy differs among teens of low and high socioeconomic status. In sum, prior research on childhood sexual abuse and teenage pregnancy is lacking in details about the effect of abuse on different subgroups. For example, although some studies show that childhood sexual abuse is more harmful for males, we can only speculate on why this is true. More studies that focus on males in particular, or that compare males and females, are needed. Additionally, we could find almost no research that examines how the association between sexual abuse and teen pregnancy varies by racial and ethnic groups. Considering that prevalence and

characteristics of both sexual abuse and teenage childbearing vary by race/ethnicity, it is likely that the relationship between the two vary by race/ethnicity as well. Clearly, more research is needed to examine differences between racial and ethnic groups in the consequences of childhood sexual abuse and to explain why the effects of sexual abuse may differ. More attention to subgroup analyses would make an important extension to the existing literature.

## WHAT WE KNOW ABOUT MEDIATING FACTORS

In addition to research showing a direct relationship between sexual abuse and teenage pregnancy, the literature offers evidence linking sexual abuse to other outcomes that serve as mediators of teen pregnancy. For example, childhood sexual abuse is not only linked with teen pregnancy risk, but also with riskier sexual behaviors and with greater substance use (which, in turn, are associated with greater risk of teen pregnancy). Knowledge about the role of mediating factors is of key importance because they represent potential areas of intervention for programs. In this next section, we examine what is currently known about the link between sexual abuse and potential mediating factors.

### Childhood sexual abuse and sexual activity

A growing body of research examining the consequences of childhood sexual abuse has shown that abuse is associated with risky sexual behaviors in adolescence and young adulthood. Findings from prospective studies indicate that childhood sexual abuse is associated with having sex at a younger age,<sup>27,59</sup> using birth control less consistently,<sup>58</sup> and having a higher risk of experiencing revictimization.<sup>27</sup> Other research has shown a positive association between childhood sexual abuse and composite measures of risky sexual behavior, which include behaviors such as having unprotected sex and having a high number of sexual partners.<sup>31,82</sup> Retrospective research has also positively linked sexual abuse with early sexual initiation,<sup>13,16,17,29,40,44,58,64,77,85</sup> having a greater number of sexual partners,<sup>5,16,31,40,43,58,64,71,72,77,85</sup> having older sexual partners,<sup>13,44</sup> and revictimization.<sup>86</sup> Also, although the findings are less consistent, some studies have also found a link between childhood sexual abuse and reduced contraceptive use<sup>20,67,69,77</sup> and condom use.<sup>69,71,72</sup> Research consistently shows that these sexual behaviors are, in turn, associated with a greater risk of pregnancy among teens (see Kirby et al. 2005 for a review),<sup>47</sup> and, therefore, operate as mediators in the relationship between sexual abuse and teen pregnancy.

In some studies that specifically examine mediating mechanisms, mediating variables such as early sex account for any relationship between child sexual abuse and teen pregnancy.<sup>75,77</sup> For example, Stock, et al. (1997) found that experiencing sexual abuse was positively associated with teen pregnancy because it increased the likelihood that teens engaged in high-risk sexual behaviors, like initiating sex at an early age or having multiple sexual partners,<sup>77</sup> while Smith (1996) found that the link between sexual abuse and teen pregnancy was explained by risky behaviors such as poor school performance, substance use, and early sexual experience.<sup>75</sup> Others have argued that sexual experience is more important than child sexual abuse in predicting teen pregnancy.<sup>67</sup> Therefore, it is important to examine how each of these factors – childhood sexual abuse, sexual activity during adolescence, and teenage pregnancy – might be interrelated. Below, we summarize what is known about the relationship between childhood sexual abuse and certain risky sexual activities that may serve as mediators of teen pregnancy risk.

*Age at first sex.* Research consistently links childhood sexual abuse with a younger age at first sexual intercourse. More specifically, studies show that sexual abuse is positively associated with being younger at first sex,<sup>13,17,29,44,58,59</sup> and with having sex before age 14,<sup>16,85</sup> before age 15,<sup>40,64,77</sup> and by age 16.<sup>27</sup> Furthermore, experiencing any type of abuse has been found to be associated with a younger age at first sex

for females,<sup>3</sup> and the number of types of abuse is associated with a younger age at first sex for males.<sup>5</sup> Although it is possible that an early first intercourse could have been a non-voluntary sexual experience, research that specifically examined the transition to first voluntary or wanted intercourse found that sexual abuse and first voluntary intercourse are positively correlated.<sup>27,29,44,67</sup> Having sex at a younger age has been consistently shown to be associated with a greater risk of a teen pregnancy,<sup>44,47,67</sup> in part because teens who become sexually active earlier have a longer amount of time in which to become pregnant.

*Number of sexual partners.* Research on childhood sexual abuse has also found that victims of sexual abuse tend to have a greater number of sexual partners during adolescence<sup>16,27,31,58,64,69,72,77,85</sup> and a greater number of lifetime sexual partners for adult men<sup>5,71</sup> and women<sup>17,31,43,58,71,77,85</sup> than those who have never been abused. Other studies have found a positive association between sexual abuse and the number of partners in the last three months for females<sup>16,71</sup> and males.<sup>64,71,72</sup> Teens who have had more sexual partners are more likely to become pregnant,<sup>36,47,61</sup> again, in part due to increased opportunity for pregnancy with greater frequency of sexual activity.

*Age of first sexual partner.* Research shows that women who experienced sexual abuse are more likely to have had their first sexual experience with a much older partner.<sup>13,44</sup> Similarly, experiencing some type of abuse (sexual, physical, or emotional) is associated with having a larger age difference with first sexual partner for women.<sup>3</sup> We did not find any studies that examined whether sexual abuse is related to age of sexual partners among men. Researchers have suggested that sexual abuse and partner age are related because experiencing sexual abuse with older perpetrators might make victims more likely to experience voluntary sexual relationships with similarly older partners.<sup>44</sup> Another explanation is that female victims of sexual abuse might seek father-figures in their male partners or may be more easily exploited compared to those who were never abused.<sup>44</sup> Having an older sexual partner is associated with a greater risk of experiencing a teen pregnancy, especially for teens who have their first sexual experience at a young age.<sup>23,49,51,90</sup> It is possible that this is a result of a higher likelihood that these relationships are either casual or coercive, in which case teens have been shown to use contraception less within these types of relationships and thus are more likely to become pregnant.<sup>51</sup>

*Revictimization.* Experiencing sexual abuse during childhood is also associated with a greater likelihood of experiencing unwanted sex, rape or assault, or intimate partner violence in adolescence, although relatively few studies have examined this relationship. Women who experienced childhood sexual abuse are more likely to experience some form of sexual assault, including subsequent rape or attempted rape,<sup>27,86</sup> and unwanted or coerced contact,<sup>86</sup> during adolescence. Women who have been sexually abused as children or adolescents are also more likely to experience intimate partner violence as adults.<sup>71</sup> Thus many women who have been sexually abused as children also experience “revictimization” or subsequent sexual abuse in adolescence or adulthood.<sup>27,86</sup> Researchers have suggested that low levels of sexual self-esteem, higher concerns about sex, and dysfunctional or uncommitted sexual behaviors (such as having sex out of loneliness, or having sex with many partners) are consequences of childhood sexual abuse that can lead to revictimization.<sup>86</sup> Since coercive sex and rape during the teenage years is associated with a greater risk of experiencing a teen pregnancy,<sup>58,72</sup> revictimization among victims of child sexual abuse could potentially lead to an especially high risk of experiencing a teenage pregnancy.

*Contraceptive and condom use.* Research has examined the relationship between sexual abuse and later contraceptive use. Many studies have found that women who have ever experienced sexual abuse are less likely to use contraception at first sex<sup>67</sup> and at last sex,<sup>77</sup> and are more likely to have ever had sex without birth control.<sup>20,27</sup> Similarly, some studies have found that women who had been sexually abused are less likely to consistently use birth control<sup>59,69</sup> and more likely to never use birth control.<sup>69</sup>



However, the connection between sexual abuse and condom use is not clear, as studies have reported conflicting results. Some studies have found that both male and female adolescents who experienced sexual abuse or forced sex were more likely to never or rarely use condoms,<sup>69</sup> and to not have used a condom at last sex.<sup>69,72</sup> Another found that childhood sexual abuse was associated with having a higher number of unprotected sexual experiences in the last three months, but not with condom use at last sex, although those who experienced childhood sexual abuse were less likely to use a condom at last sex with a steady partner as compared with those with no history of abuse.<sup>71</sup> The authors suggest that this finding is possibly a result of condom use rates being higher already with nonsteady partners, leading to little variance in this measure by sexual abuse history.<sup>71</sup> However, other research has found no association between having sex without condoms and a history of forced sex,<sup>16,58,85</sup> forced sexual contact,<sup>64</sup> or any other type of child abuse.<sup>3</sup> Contraception and condoms clearly protect against pregnancy, so sexually active teens who more consistently use contraception are less likely to become pregnant.<sup>14</sup>

It is not yet clear as to why teens who were sexually abused as children would be less likely to later use contraception or condoms, and researchers have only been able to hypothesize a reason for a connection. It is possible that the mental and emotional consequences of sexual abuse lead to riskier behaviors in general, or lower levels of self-esteem in adolescence, which could provide teens with less power to negotiate contraceptive or condom use.<sup>68</sup> However, another possible explanation for the different rates of contraceptive use for abused and non-abused teens is that teens who had been sexually abused may be deliberately using no contraceptive method in order to get pregnant.<sup>15,63</sup> In fact, one bivariate study found that teen girls who had been sexually abused were more likely to report that they were trying to conceive and that their boyfriends were encouraging them to get pregnant,<sup>63</sup> and another study found that those who had been sexually abused were more likely to have gotten pregnant intentionally.<sup>15</sup>

*Explanations of mediating role.* Researchers and theorists have suggested a number of pathways to explain the relationship between childhood sexual abuse and sexual risk-taking in adolescence. Some have suggested that sexual abuse leads to a preoccupation with or aversion to sex, which can manifest itself in later inappropriate sexual behaviors.<sup>59</sup> Researchers also have noted that stigma or shame experienced by a child following sexual abuse may be internalized, and the victim can generalize the abusive experience to other sexual experiences or the perpetrator to other sexual partners.<sup>59</sup> Others cite long-lasting negative mental health consequences of childhood abuse and the ways in which victims cope with these consequences (such as substance use) as factors associated with a greater likelihood of sexual risk-taking behaviors among victims of sexual abuse.<sup>54</sup>

## **Child sexual abuse and other risk factors**

A number of other risk factors (e.g., trading sex for money, alcohol or drugs, substance use/abuse, poor mental health and attitudes about sex) have been identified as being associated with childhood sexual abuse and teen pregnancy. Both bivariate<sup>13</sup> and multivariate<sup>13,71,87</sup> analyses indicate that the experience of childhood sexual abuse is associated with trading sex for alcohol, drugs or money. While trading sex for alcohol, drugs, or money has not been explicitly linked with teen pregnancy in past research,<sup>47</sup> teens who engage in prostitution do seem more likely to engage in a variety of other risky sexual behaviors that may lead to an unintentional pregnancy.

Substance use and abuse have also been linked to the experience of sexual abuse during childhood. Teens who experienced sexual abuse as children are at greater risk of smoking<sup>57</sup> or using or abusing drugs and alcohol.<sup>5,46,50,57,82</sup> In addition to long-term substance use, studies have also found that childhood sexual abuse is also positively associated with substance use prior to or during sex.<sup>13,69,85</sup> Substance use and abuse

are consistently associated with a higher risk of pregnancy among teens.<sup>47</sup>

Several research studies have found an association between childhood sexual abuse and poor mental health outcomes. For example, childhood sexual abuse has been found to be associated with greater emotional and behavioral problems,<sup>7,12,32,78</sup> low self-esteem and negative self-image,<sup>18,78</sup> depression<sup>7,53,60,66</sup> and suicide contemplation<sup>72</sup> among teens. However, a few studies find little difference between the abused and nonabused respondents in terms of self-esteem or depressed mood, for at least some populations.<sup>15,18,22</sup> Poor mental health has been shown to be associated with a higher risk of having a teen pregnancy. Specifically, low self-esteem and attempted suicide have been shown to be linked to a higher risk of teen pregnancy,<sup>61,62</sup> while depression has been linked to less contraceptive use<sup>48</sup> and a higher likelihood of having a teen birth.<sup>48</sup>

Attitudes about sex are also associated with the experience of childhood sexual abuse. Abused women are more preoccupied with sex,<sup>59</sup> more sexually averse and sexually ambivalent,<sup>59</sup> and they report more negative interactions with their romantic partners (in bivariate analyses)<sup>30</sup> and greater sexual concerns<sup>86</sup> than non-victimized women. The impact of sexual abuse on sexual attitudes may differ by gender. Women who have been sexually abused as children are more likely to have higher scores on the sexual concerns scale than men who have been sexually abused as children.<sup>8</sup> Moreover, girls who experienced sexual abuse report more intrusive thoughts, more hyper-arousal, more sexual anxiety, more personal vulnerability, and perceive the world as a more dangerous place than boys who also experienced abuse; whereas, boys report more eroticism than girls.<sup>26</sup> It is possible that sexual anxiety, and more personal vulnerability, or negative interactions may lead to reduced communication between partners and thus a greater likelihood of unprotected sex and teen pregnancy.

## **CHILD SEXUAL ABUSE IN TEEN PREGNANCY PREVENTION PROGRAMS**

Although childhood sexual abuse has been found by a number of studies to be significantly associated with teen pregnancy and with important mediating factors, there is little evidence of pregnancy prevention programs that specifically address this issue. In fact, we found little published work on evaluations of current teen pregnancy prevention programs that address childhood sexual abuse in their curricula, and no evaluations on the components of the curriculum that specifically address sexual abuse. This is striking, given that program practitioners have identified childhood sexual abuse and its relationship with teen pregnancy as a critical issue in the field of teen pregnancy prevention.

We did, however, find general information on and evaluations of two programs that address sexual abuse among adolescents in their curricula. The first program, *Project Taking Charge* was developed by the American Association of Family and Consumer Sciences and the Office of Adolescent Pregnancy Prevention Program. It is a six- to nine-week abstinence-based program for early adolescents in grade 7 that advocates delaying the onset of sexual activity and other high risk behaviors.<sup>42,70</sup> One component of the curriculum incorporates discussions of sexual abuse and prevention. A quasi-experimental evaluation of Project Taking Charge found a marginally significant negative association with sexual initiation.<sup>42</sup> However, because discussions about sexual abuse were only one component of a broader program, it is unclear how these discussions are connected to teen pregnancy prevention. Another program that addresses sexual abuse is *Wise Guys*, a prevention program for adolescent males (targeting those in the 7<sup>th</sup> and 8<sup>th</sup> grades) offered by the Family Life Council of Greater Greensboro in North Carolina. *Wise Guys* has given attention to sexual abuse and dating violence, and the program encourages young men to treat females with respect.<sup>76</sup> A

quasi-experimental evaluation of *Wise Guys* found the program was associated with increased contraceptive use among program participants compared with a control group.<sup>35</sup> However, the program did not separately evaluate the effectiveness of messages about sexual abuse and dating violence, so it is not clear how this program links these discussions with pregnancy prevention. We also found a study that analyzes the impact of an HIV intervention program targeting troubled youth, including victims of abuse, on HIV knowledge, but it does not appear that this program addresses sexual abuse or pregnancy directly.<sup>74</sup> These findings indicate the need for more pregnancy prevention programs that address childhood sexual abuse and for evaluation of how programs incorporating messages and discussion about sexual abuse are associated with risky sexual behaviors that may lead to teen pregnancy.

## CONCLUSION

This literature review set out to answer four specific research questions. Our first question asked if there is a link between childhood sexual abuse and teen pregnancy. Overall, the bulk of research on the association between childhood sexual abuse and teen pregnancy suggests that childhood sexual abuse is significantly associated with the experience of a teen pregnancy.<sup>5,6,17,29,38,39,41,45,58,59,61,64,72</sup>

Our second question involved childhood sexual abuse as an underlying causal factor of teen pregnancy. Findings from a number of prospective studies reveal a positive association between childhood sexual abuse and subsequent teen pregnancy,<sup>27,39,59,65</sup> although one study indicates no association between sex abuse and teen pregnancy.<sup>87</sup> It is also important to note the data limitations inherent to such a sensitive and difficult topic. Although findings from most prospective studies indicate a significant and likely causal association between childhood sexual abuse and teen pregnancy, and results from other retrospective studies indicate significant associations between childhood sexual abuse and teen pregnancy, more research is needed to explore the complex relationship between childhood sexual abuse and subsequent risk of teen pregnancy. Other impediments to reaching solid conclusions are that measures of sexual abuse are inconsistent across studies; many studies use self-report data by an individual instead of substantiated reports of sexual abuse as the primary source of information; detailed questions on sexual abuse in large scale representative surveys are uncommon; most studies do not include comparison or control samples; and many studies use small or unrepresentative samples in their analyses. Each of these methodological issues hinders our ability to draw definitive conclusions about the underlying causality of childhood sexual abuse.

Third, we were interested in how research findings differ across various groups and in identifying subpopulations and target groups for which the research is most sparse. While some studies found that sexual abuse and teen pregnancy were positively associated for both males and females,<sup>64,69</sup> others found that child sexual abuse was a stronger risk factor for teen pregnancy among males than females,<sup>39,69</sup> highlighting the need for practitioners to give at least equal attention to both male and female teens who have suffered sexual abuse in the past. We found only one (bivariate) study that tested the association between childhood sexual abuse and teenage pregnancy across racial/ethnic groups, and we could not find any studies that examined the relationship between childhood sexual abuse and teen pregnancy across socioeconomic status. These few studies indicate the dearth of research that examines the impact of sexual abuse on important subpopulations and emphasize the need for researchers to conduct more rigorous investigations among larger samples that will help pregnancy prevention practitioners understand if particular subgroups are in need of more targeted interventions.

Finally, we were interested in the factors that mediate the relationship between childhood sexual abuse and teen pregnancy. It is clear that childhood sexual abuse has a positive association with risky sexual behaviors in adolescence, such as having sex at an earlier age,<sup>13,16,17,27,29,40,44,58,59,64,77,85</sup> having more sexual

partners,<sup>5,16,17,31,43,58,64,71,72,77,85</sup> having older sexual partners,<sup>13,44</sup> revictimization (such as experiencing unwanted or coerced sex, rape, or intimate partner violence),<sup>27,86</sup> and exchanging sex for money, alcohol, and drugs.<sup>13,71,87</sup> Moreover, childhood sexual abuse also seems to have a clear connection with emotional problems<sup>7,12,18,32,53,60,66,72,78</sup> and substance use in adolescence.<sup>5,13,46,50,57,69,82,85</sup> Each of these mediators have been found to be associated with a higher likelihood of experiencing a teen pregnancy.<sup>47</sup> Because of the numerous possible mediating effects, it is difficult to disentangle direct and indirect effects to determine the precise causal pathways between childhood sexual abuse and teen pregnancy. However, the information presented on mediating factors is of key importance because they represent potential areas of intervention for programs. For example, given that we know that childhood sexual abuse is not only associated with teen pregnancy risk, but also with greater substance use (which, in turn, is linked to a greater risk of teen pregnancy), then programs serving sexually abused teens can also address the risks associated with substance use as one additional strategy for reducing the likelihood of teen pregnancy among youth who have been sexually abused.

This literature review adds to current knowledge by examining the most recent research available on child sexual abuse and teen pregnancy, by examining possible mediators between the two, and by pointing to a need for further research in this area. Although the balance of the literature indicates a connection between sexual abuse and teen pregnancy, we found only 11 articles published since 2000, highlighting the lack of recent studies that address this issue. The shortage of peer-reviewed articles, especially those that are prospective and address subgroup differences, is itself an important finding and is indicative of the need for more data collection and analysis on this important issue. We have also found that there have been few recently published evaluations of teen pregnancy prevention programs that address childhood sexual abuse in their curricula and none that explicitly evaluate the effectiveness of the sexual abuse components of the programs. Our literature review should be used as a catalyst for programs to incorporate attention to childhood sexual abuse into their curricula and evaluate the effectiveness of such program components.

Despite the methodological limitations that exist in the current body of research, the findings discussed in this review offer useful insights for program providers. The consequences of sexual abuse on risky sexual behavior and teenage pregnancy are especially relevant for programs working to prevent teen pregnancy. Even if studies cannot determine causality with certainty, it is still important to know that prior sexual abuse is an important *marker* of risk. Program providers want to know if a teen is at high risk of becoming pregnant, and the evidence is clear that sexually abused girls are a group at an elevated risk of pregnancy – even if this is due to riskier family backgrounds or other mitigating factors that might explain away any direct association between sex abuse and pregnancy.

However, it is not only important for a provider to know whether a program participant has been a victim of abuse in order to measure risk, but it is also important because abused teens may have distinct problems as a result of the abuse. For example, victims of sexual abuse, as found in this literature review, are more likely to suffer from mental health problems and to use substances as a coping mechanism. Thus, program providers may need to pay particular attention to the underlying causes of these mental health and substance abuse problems in order to focus their prevention efforts on these issues. Also, victims of sexual abuse may face challenges to their self-esteem or preoccupations with sex that make them more easily exploited as teenagers. Program providers could work to instill in these teens feelings of empowerment and control over their sexual relationships.

Due to the higher risk of pregnancy among teens who have experienced childhood sexual abuse, it is essential for program providers to address the unique issues facing teens who have experienced childhood sexual abuse. At minimum, program providers should be aware of the link between sexual abuse and teen pregnancy. If appropriate, intake interviews could include questions about whether a teen has ever experi-

enced sexual abuse, and program providers should put training and capacity building projects in place to prepare staff members to recognize signs of sexual abuse and work with teens who report experiencing abuse. Programs and counselors should refer these teens to programs that are able to help them cope with their experiences. The connection between childhood sexual abuse and revictimization in adolescence indicates that programs should also work with teens to help prevent their being a victim of abuse during adolescence. For example, program staff could stress the seriousness of abuse and encourage teens to seek help if they are in an abusive relationship. Finally, because childhood sexual abuse is linked to substance abuse and poor mental health, program providers must face the challenge of working with teens with multiple problems and risk behaviors.

The dearth of existing research on this topic points to an urgent need for a more comprehensive body of rigorous studies on the association between sexual abuse and teen pregnancy. This will require several steps. First, policy makers, program providers, and researchers are in need of an agreed-upon definition of what qualifies as sexual abuse, in order to make clear assertions about its consequences. Second, our ability to draw conclusions about the consequences of childhood sexual abuse would be greatly enhanced with the addition of more prospective, longitudinal studies and studies that control for confounding factors in the analyses. This is critical in order to disentangle the general effects of family and background characteristics from the specific effects of sexual abuse. Otherwise, analyses may report spurious relationships.<sup>88</sup> Moreover, the addition of more qualitative research on the issue would greatly enhance this field of research. We were only able to identify one qualitative study that examined the association between child sexual abuse and teen pregnancy.<sup>15</sup> Qualitative research would be beneficial because it would allow researchers to explore, more specifically, the impact of childhood sexual abuse on adolescent outcomes, and would allow for a more comprehensive understanding of why a link may exist between childhood sexual abuse and adolescent risky sexual behaviors and pregnancy. Third, findings from studies that use nationally representative samples and incorporate stricter control variables would enable researchers to generalize findings on the link between sexual abuse and teenage pregnancy to the larger population. Fourth, we currently need more studies that examine the complex pathways between sexual abuse, mental health, substance use, sexual risk-taking, and teen pregnancy, in order to better understand how these factors are inter-related. Fifth, more research is needed to assess the association between childhood sexual abuse and teen pregnancy across subgroups and target populations. Finally, more information is needed on appropriate interventions to improve outcomes among sexually abused teens and about prevention efforts to reduce the incidence of sexual abuse. With all of this information, better prevention and intervention programs can be designed, and the impacts of these programs can be evaluated.

## REFERENCES

- <sup>1</sup> Abma, J. C., Driscoll, A., & Moore, K. A. (1998). Young women's degree of control over first intercourse: An exploratory analysis. *Family Planning Perspectives, 30*(1), 12-18.
- <sup>2</sup> Abma, J. C., Martinez, G. M., Mosher, W. D., & Dawson, B. S. (2004). *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002*. Vital Health Stat 23(24). Hyattsville, MD: National Center for Health Statistics.
- <sup>3</sup> Adams, J. A., & East, P. L. (1999). Past physical abuse is significantly correlated with pregnancy as an adolescent. *Journal of Pediatric and Adolescent Gynecology, 12*, 133-138.
- <sup>4</sup> Advocates for Youth. (1995). *Child sexual abuse I: An overview*. Retrieved April 12, 2007, from <http://www.advocatesforyouth.org/PUBLICATIONS/factsheet/fsabuse1.htm>
- <sup>5</sup> Anda, R. F., Chapman, D. P., Feletti, V. J., Edwards, V., Williamson, D. F., Croft, J. B., et al. (2002). Adverse childhood experiences and risk of paternity in teen pregnancy. *Obstetrics and Gynecology, 100*(1), 34-45.
- <sup>6</sup> Anda, R. F., Felitti, V. J., Chapman, D. P., Croft, J. B., Williamson, D. F., Santelli, J. S., et al. (2001). Abused boys, battered mothers, and male involvement in teen pregnancy. *Pediatrics, 107*(2), E19.
- <sup>7</sup> Bal, S., Van Oost, P., De Bourdeaudhuij, L., & Crombez, G. (2003). Avoidant coping as mediator between self-reported sexual abuse and stress-related symptoms in adolescents. *Child Abuse & Neglect, 27*, 883-897.
- <sup>8</sup> Banyard, V. L., Williams, L. M., & Siegal, J. A. (2004). Childhood sexual abuse: A gender perspective on context and consequence. *Child Maltreatment, 9*(3), 223-238.
- <sup>9</sup> Bartholow, B., Doll, L. S., Joy, D., Douglas, J., Bolan, G., Harrison, J., et al. (1994). Emotional, behavioral, and HIV risks associated with sexual abuse among homosexual and bisexual men. *Child Abuse & Neglect, 18*, 747-761.
- <sup>10</sup> Bensley, L. S., Van Eenwyk, J., & Simmons, K. W. (2000). Self-reported childhood sexual and physical abuse and adult HIV-risk behaviors and heavy drinking. *American Journal of Preventative Medicine, 18*, 151-158.
- <sup>11</sup> Blinn-Pike, L., Berger, T., Dixon, D., Kuschel, D., & Kaplan, M. (2002). Is there a causal link between maltreatment and adolescent pregnancy? A literature review. *Perspectives on Sexual and Reproductive Health, 34*(2), 68-75.
- <sup>12</sup> Bolger, K. E., Patterson, C. J., & Kupersmidt, J. B. (1998). Peer relationships and self-esteem among children who have been maltreated. *Child Development, 69*(4), 1171-1197.
- <sup>13</sup> Boyer, D., & Fine, D. (1992). Sexual abuse as a factor in adolescent pregnancy and child maltreatment. *Family Planning Perspectives, 24*(1), 4-11, 19.
- <sup>14</sup> Bruckner, H., Martin, A., & Bearman, P. S. (2004). Ambivalence and pregnancy: Adolescents' attitudes, contraceptive use and pregnancy. *Perspectives on Sexual and Reproductive Health, 36*(6), 248-257.

- <sup>15</sup> Butler, J. R., & Burton, L. M. (1990). Rethinking teenage childbearing: Is sexual abuse a missing link. *Family Relations*, 39(1), 73-80.
- <sup>16</sup> Buzi, R., Tortolero, S., Ross, M., Addy, R., Markham, C., & Roberts, R. (2003). The impact of a history of sexual abuse on high-risk sexual behaviors among females attending alternative schools. *Adolescence*, 38(152), 595-605.
- <sup>17</sup> Carpenter, S. C., Clyman, R. B., Davidson, A. J., & Steiner, J. F. (2001). The association of foster care or kinship care with adolescent sexual behavior and first pregnancy. *Pediatrics*, 108(3), 46.
- <sup>18</sup> Cecil, H., & Matson, S. C. (2001). Psychosocial functioning and family discord among African-American adolescent females with and without a history of childhood sexual abuse. *Child Abuse & Neglect*, 25, 973-988.
- <sup>19</sup> Centers for Disease Control and Prevention. (2006). *Adverse Childhood Experiences Study: Data and Statistics*. Retrieved July, 2007, from <http://www.cdc.gov/nccdphp/ace/prevalence.htm>
- <sup>20</sup> Champion, H., Foley, K., DuRant, R. H., Hensberry, R., Altman, D., & Wolfson, M. (2004). Adolescent sexual victimization, use of alcohol, other substances, and other risk behaviors. *Journal of Adolescent Health*, 35(4), 321-328.
- <sup>21</sup> Child Welfare Information Gateway. (2006). *Impact of sexual abuse*. Retrieved April, 2007, from <http://www.childwelfare.gov/can/impact/types/sexual.cfm>
- <sup>22</sup> Danielson, C. K., De Arellano, M. A., Kilpatrick, D. G., Saunders, B., & Resnick, H. S. (2005). Child maltreatment in depressed adolescents: Differences in symptomology based on history of abuse. *Child Maltreatment*, 10(1), 37-48.
- <sup>23</sup> Darroch, J. E., Landry, D. J., & Oslak, S. (1999). Age differences between sexual partners in the United States. *Family Planning Perspectives*, 31(4), 160-167.
- <sup>24</sup> Doll, L. S., Joy, D., Bartholow, B., Harrison, J., Bolan, G., Douglas, J., et al. (1992). Self-reported childhood and adolescent sexual abuse among adult homosexual and bisexual men. *Child Abuse & Neglect*, 16, 855-864.
- <sup>25</sup> Doll, L. S., Koenig, L. J., & Purcell, D. W. (2004). Child sexual abuse and adult sexual risk: Where are we now? In L. J. Koenig, L. S. Doll, A. O'Leary, & W. Pequegnat (Eds.), *From Child Sexual Abuse to Adult Sexual Risk: Trauma, Revictimization, and Intervention* (pp. 3-11). Washington, DC: American Psychological Association.
- <sup>26</sup> Feiring, C., Taska, L., & Lewis, M. (1999). Age and gender differences in children's and adolescents' adaptation to sexual abuse. *Child Abuse & Neglect*, 23(2), 115-128.
- <sup>27</sup> Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1997). Childhood sexual abuse, adolescent sexual behaviors and sexual revictimization. *Child Abuse & Neglect*, 21(8), 789-803.
- <sup>28</sup> Finkelhor, D., & Jones, L. (2006). Why have child maltreatment and child victimization declined? *Journal of Social Issues*, 62(4), 685-716.

- <sup>29</sup> Fiscella, K., Kitzman, H. J., Cole, R. E., Sidora, K. J., & Ods, D. (1998). Does child abuse predict adolescent pregnancy? *Pediatrics*, *101*(4), 620-624.
- <sup>30</sup> Flanagan, A. S., & Furman, W. C. (2000). Sexual victimization and perceptions of close relationships in adolescence. *Child Maltreatment*, *5*(4), 350-359.
- <sup>31</sup> Friedrich, W. N., Lysne, M., Sim, L., & Shamos, S. (2004). Assessing sexual behavior in high-risk adolescents with the Adolescent Clinical Sexual Behavior Inventory (ACSBI). *Child Maltreatment*, *9*(3), 239-250.
- <sup>32</sup> Garnefski, N., & Diekstra, R. F. W. (1997). Child abuse and emotional behavioral problems in adolescence: Gender differences. *Journal of the American Academy of Child and Adolescent Psychiatry*, *36*(3), 323-329.
- <sup>33</sup> Gatz, M., Russell, L. A., Grady, J., Kram-Fernandez, D., Clark, C., & Marshall, B. (2005). Women's recollections of victimization, psychological problems, and substance use. *Journal of Community Psychology*, *33*(4), 479-493.
- <sup>34</sup> Goldman, J., Salus, M. K., Wolcott, D., & Kennedy, K. Y. (2003). *A coordinated response to child abuse and neglect: The foundation for practice*. Washington, DC, U.S. Department of Health and Human Services. Retrieved June 2006 from <http://www.childwelfare.gov/pubs/usermanuals/foundation/foundationc.cfm>.
- <sup>35</sup> Gottsegen, E., & Philliber, W. (2001). Impact of sexual responsibility program on young males. *Adolescence*, *36*, 427-433.
- <sup>36</sup> Guagliardo, M. F., Huang, Z., & D'Angelo, L. J. (1999). Fathering pregnancies: Marking health-risk behaviors in urban adolescents. *Journal of Adolescent Health*, *24*(1), 10-15.
- <sup>37</sup> Guttmacher Institute. (2006). *U.S. Teenage Pregnancy Statistics: National and State Trends and Trends by Race and Ethnicity*. New York, NY.
- <sup>38</sup> Haley, N., Roy, M. D., Leclerc, P., Boudreau, J.-F., & Boivin, J.-F. (2004). Characteristics of adolescent street youth with a history of pregnancy. *Journal of Pediatric and Adolescent Gynecology*, *17*(313-320).
- <sup>39</sup> Herrenkohl, E. C., Herrenkohl, R. C., Egolf, B. P., & Russo, M. J. (1998). The relationship between early maltreatment and teenage parenthood. *Journal of Adolescence*, *21*, 291-303.
- <sup>40</sup> Hillis, S., Anda, R., Felitti, V., & Marchbanks, P. (2001). Adverse childhood experiences and sexual risk behaviors in women: A retrospective cohort study. *Family Planning Perspectives*, *33*(5), 206-211.
- <sup>41</sup> Hillis, S. D., Anda, R. F., Dube, S. R., Felitti, V. J., Marchbanks, P. A., & Marks, J. S. (2004). The association between adverse childhood experiences and adolescent pregnancy, long term psychosocial consequences, and fetal death. *Pediatrics*, *113*(2).
- <sup>42</sup> Jorgensen, S. R., Potts, V., & Camp, B. (1993). Project Taking Charge: Six-month follow-up of a pregnancy prevention program for early adolescents. *Family Relations*, *42*, 401-406.



- <sup>43</sup> Kahn, J. A., Huang, B., Rosenthal, S. L., Tissot, A. M., & Burk, R. D. (2005). Coercive sexual experiences and subsequent human papillomavirus infection and squamous intraepithelial lesions in adolescent and young adult women. *Journal of Adolescent Health, 36*, 363-371.
- <sup>44</sup> Kellogg, N., Hoffman, T., & Taylor, E. (1999). Early sexual experiences among pregnant and parenting adolescents. *Adolescence, 34*(134).
- <sup>45</sup> Kenney, J. W., Reinholtz, C., & Angelini, P. J. (1997). Ethnic differences in childhood and adolescent sexual abuse and teenage pregnancy. *Journal of Adolescent Health, 21*(1), 3-10.
- <sup>46</sup> Kilpatrick, D. G., Aciemo, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology, 68*(1), 19-30.
- <sup>47</sup> Kirby, D., Lepore, G., & Ryan, J. (2005). *Sexual risk and protective factors: Factors affecting teen sexual behavior, pregnancy, childbearing, and sexually transmitted disease: Which are important? Which can you change?* Washington, DC: The National Campaign to Prevent Teen Pregnancy.
- <sup>48</sup> Kowaleski-Jones, L., & Mott, F. L. (1998). Sex, contraception and childbearing among high-risk youth: Do different factors influence males and females? *Family Planning Perspectives, 30*(4), 163-169.
- <sup>49</sup> Leitenberg, H., & Saltzman, H. (2000). A statewide survey of age at first intercourse for adolescent females and age of their male partners: Relation to other risk behaviors and statutory rape implications. *Archives of Sexual Behavior, 29*(3), 203-215.
- <sup>50</sup> Liebschutz, J., Savetsky, J. B., Saitz, R., Horton, N. J., Lloyd-Travaglini, C., & Samet, J. H. (2002). The relationship between sexual and physical abuse and substance abuse consequences. *Journal of Substance Abuse Treatment, 22*, 121-128.
- <sup>51</sup> Manlove, J., Terry-Humen, E., & Ikramullah, E. (2006). Young teens and older sexual partners: Correlates and consequences for males and females. *Perspectives on Sexual and Reproductive Health, 38*(4), 197-207.
- <sup>52</sup> Maynard, R. A., Editor. (1997). *Kids having kids: Economic costs and social consequences of teen pregnancy*. Washington, DC: The Urban Institute.
- <sup>53</sup> Meyerson, L. A., Long, P. J., Miranda, R., & Marx, B. P. (2002). The influence of childhood sexual abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents. *Child Abuse & Neglect, 26*, 387-405.
- <sup>54</sup> Miller, M. (1999). A model to explain the relationship between sexual abuse and HIV risk among women. *AIDS Care, 11*(1), 3-20.
- <sup>55</sup> Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health, 91*, 753-760.
- <sup>56</sup> Moore, K. A., Myers, D. E., Morrison, D. R., Nord, C. W., Brown, B. V., & Edmonston, B. (1993). Age at first birth and later poverty. *Journal of Research on Adolescence, 3*(4), 393-422.

- <sup>57</sup> Moran, P. B., Vuchinich, S., & Hall, N. K. (2004). Associations between types of maltreatment and substance use during adolescence. *Child Abuse & Neglect*, 28, 565-574.
- <sup>58</sup> Nagy, S., DiClemente, R., & Adcock, A., G. (1995). Adverse factors associated with forced sex among Southern adolescent girls. *Pediatrics*, 96(5), 944-946.
- <sup>59</sup> Noll, J. G., Trickett, P. K., & Putnum, F. W. (2003). A prospective investigation of the impact of childhood sexual abuse on the development of sexuality. *Journal of Consulting and Clinical Psychology*, 71(3), 575-587.
- <sup>60</sup> Osborne, L., & Rhodes, J. E. (2001). The role of life stress and social support in the adjustment of sexually victimized pregnant and parenting minority adolescents. *American Journal of Community Psychology*, 29(6), 833-849.
- <sup>61</sup> Pierre, N., Shrier, L., Emans, S. J., & DuRant, R. (1998). Adolescent males involved in pregnancy: Associations of forced sexual contact and risk behaviors. *Journal of Adolescent Health*, 23(6), 364-369.
- <sup>62</sup> Plotnick, R. D., & Butler, S. S. (1991). Attitudes and adolescent nonmarital childbearing: Evidence from the National Longitudinal Survey of Youth. *Journal of Adolescent Health*, 6(4), 470-492.
- <sup>63</sup> Rainey, D. Y., Stevens-Simon, C., & Kaplan, D. W. (1995). Are adolescents who report prior sexual abuse at higher risk for pregnancy? *Child Abuse & Neglect*, 19(10), 1283-1288.
- <sup>64</sup> Raj, A., Silverman, J. G., & Amaro, H. (2000). The relationship between sexual abuse and sexual risk among high school students: Findings from the 1997 Massachusetts Youth Risk Behavior Survey. *Maternal & Child Health Journal*, 4(2), 125-134.
- <sup>65</sup> Roberts, R., O'Connor, T., Dunn, J., Golding, J., & T. A. S. T. (2004). The effects of child sexual abuse in later family life; mental health, parenting, and adjustment of offspring. *Child Abuse and Neglect*, 28, 525-545.
- <sup>66</sup> Roosa, M. W., Reinholtz, C., & Angelini, P. J. (1999). The relation of child sexual abuse and depression in young women: Comparisons across four ethnic groups. *Journal of Abnormal Child Psychology*, 27(1), 65-76.
- <sup>67</sup> Roosa, M. W., Tein, J.-Y., Reinholtz, C., & Angelini, P. J. (1997). The relationship of childhood sexual abuse to teenage pregnancy. *Journal of Marriage & the Family*, 59(1), 119-130.
- <sup>68</sup> Rosenthal, D., Moore, S., & Flynn, I. (1991). Adolescent self-efficacy, self-esteem and sexual risk-taking. *Journal of Community and Applied Social Psychology*, 1(2), 77-88.
- <sup>69</sup> Saewyc, E. M., Magee, L. L., & Pettingell, S. E. (2004). Teenage pregnancy and associated risk behaviors among sexually abused adolescents. *Perspectives on Sexual and Reproductive Health*, 36(3), 98-105.
- <sup>70</sup> Schultz, J. B. (1998). Project taking charge. *Human Development and Family Life Bulletin* (published by the Department of Human Development and Family Science at the Ohio State University, Winter, 1998), 4.

- <sup>71</sup> Senn, T., Carey, M., Vanable, P., Coury-Doniger, P., & Urban, M. (2006). Childhood sexual abuse and sexual risk behavior among men and women attending a sexually transmitted disease clinic. *Journal of Consulting and Clinical Psychology, 74*(4), 720-731.
- <sup>72</sup> Shrier, L. A., Pierce, J. D., Emans, S. J., & DuRant, R. H. (1998). Gender differences in risk behaviors associated with forced or pressured sex. *Archives of Pediatrics and Adolescent Medicine, 152*, 57-63.
- <sup>73</sup> Singh, S., & Darroch, J. E. (2000). Adolescent pregnancy and childbearing: Levels and trends in developed countries. *Family Planning Perspectives, 32*(1), 14-23.
- <sup>74</sup> Slomin-Nevo, V., Auslander, W. F., Ozawa, M. N., & Jung, K. G. (1996). The long term impact of AIDS-preventive interventions for delinquent and abused adolescents. *Adolescence, 31*(122), 409-421.
- <sup>75</sup> Smith, C. (1996). The link between childhood maltreatment and teenage pregnancy. *Social Work Research, 20*(3), 131-142.
- <sup>76</sup> Sonenstein, F., Stewart, K., Lindberg, L. D., Pernas, M., & Williams, S. (1997). *Involving Males in Preventing Teen Pregnancy: A Guide for Program Planners*. Washington, DC: The Urban Institute.
- <sup>77</sup> Stock, J., L., Bell, M. A., Boyer, D. K., & Connell, F. A. (1997). Adolescent pregnancy and sexual risk-taking among sexually abused girls. *Family Planning Perspectives, 29*(5), 200-203, 227.
- <sup>78</sup> Swanston, H. Y., Plunkett, A. M., O'Toole, B. I., Shrimpton, S., Parkinson, P. N., & Oates, R. K. (2003). Nine years after child sexual abuse. *Child Abuse & Neglect, 27*, 967-984.
- <sup>79</sup> Terry-Humen, E., Manlove, J., & Moore, K. A. (2005). *Playing catch-up: How children born to teen mothers fare*. Washington, DC: The National Campaign to Prevent Teen Pregnancy.
- <sup>80</sup> Thompson, M. P., Arias, I., Basile, K. C., & Desai, S. (2002). The association between childhood physical and sexual victimization and health problems in adulthood in a nationally representative sample of women. *Journal of Interpersonal Violence, 17*, 1115-1129.
- <sup>81</sup> Thornberry, T., Ireland, T., & Smith, C. (2001). The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes. *Development and Psychopathology, 13*, 957-979.
- <sup>82</sup> Tyler, K. A., Whitebeck, L. B., Hoyt, D. R., & Yoder, K. A. (2000). Predictors of self-reported sexually transmitted diseases among homeless and runaway adolescents. *The Journal of Sex Research, 37*(4), 369-377.
- <sup>83</sup> U.S. Department of Health and Human Services. (2006). *Child Maltreatment 2004*. Washington, DC: Administration on Children, Youth, and Families.
- <sup>84</sup> U.S. Department of Health and Human Services. (2007). *Child Maltreatment 2005*. Washington, DC: Administration on Children, Youth, and Families.
- <sup>85</sup> Upchurch, D. M., & Kusunoki, Y. (2004). Associations between forced sex, sexual and protective practices, and sexually transmitted diseases among a national sample of adolescent girls. *Women's Health Issues, 14*, 75-84.

- <sup>86</sup> Van Bruggen, L. K., Runtz, M. G., & Kadlec, H. (2006). Sexual victimization: The role of sexual self-esteem and dysfunctional sexual behaviors. *Child Maltreatment, 11*(2), 131-145.
- <sup>87</sup> Widom, C., & Kuhns, J. (1996). Childhood victimization and subsequent risk for promiscuity, prostitution, and teenage pregnancy: A prospective study. *American Journal of Public Health, 86*(11), 1607-1612.
- <sup>88</sup> Widom, C. S. (2007, March 7-8). *A reaction to "Is teen pregnancy a likely consequence of child abuse and neglect?"*, by Jennie G. Noll Paper presented at the What's it Going to Take? Extending the Research Base to Improve Teen Pregnancy Prevention, Washington, DC.
- <sup>89</sup> Wilson, J. J. (2001). *Juvenile justice bulletin: The decline in child sexual abuse cases*: Office of Juvenile Justice and Delinquency Prevention.
- <sup>90</sup> Zavodny, M. (2001). The effect of partners' characteristics on teenage pregnancy and its resolution. *Family Planning Perspectives, 33*(5), 192-199, 205.