"PREGNANCY CHANGED ME FROM A KID TO A MOM": A QUALITATIVE STUDY OF TEENS' RESILIENT BELIEFS ABOUT PREGNANCY AND PRENATAL HEALTH IN THE CONTEXT OF CUMULATIVE ADVERSE EXPERIENCES

A dissertation submitted in partial fulfillment of the degree of Doctor of Philosophy from New York University Silver School of Social Work

January, 2018

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DEDICATION

“It is never too late to become what we might have been” – George Eliot

This study is dedicated to all the young women who strive to better their lives through motherhood, regardless of the level of support they receive or what the world at large tells them about their chances. Their passion to rewrite history by being better parents than their own exists in spite of, or perhaps because of the adversity they have suffered, and was the inspiration for preserving their voices through this work.

To David, who made it all possible.

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Payne, Nancy A. “Pregnancy changed me from a kid to a mom”: A qualitative study of teens’ resilient beliefs about pregnancy and prenatal health in the context of cumulative adverse experiences. New York University. Ph.D., January, 2018.

Teen pregnancy has been consistently perceived as a substantial social problem, despite recent declines and some equivocal evidence from longitudinal studies. The evidence for this framing has been gleaned from quantitative studies that demonstrate comparative decline in sociodemographic outcomes for the teens themselves and developmental and behavioral deficits for their children over time. Qualitative inquiry has provided an alternate perspective, one that provides teens with a voice, as their voices had been unheard until the last two decades. There are several areas largely unexplored with teens that have been studied with adult, higher-risk women. These are, first, teens’ perspective and behavior during the prenatal period, which is vital for infant health and development and provides these young mothers-to-be with an opportunity to explore the meaning of this life-changing transition, how they feel toward their infants, and their future plans. The second is the impact of the interpersonal trauma and other cumulative forms of adversity pregnant teens have often experienced, on these perspectives.

The current qualitative study examined the perspectives of and behaviors around pregnancy in a sample of inner city pregnant teens receiving supportive home-visiting services from the Nurse-Family Partnership. Using a grounded theory approach, the study inductively explored the prenatal phase, and inquired about developmental (level of stability, quality of attachment, early interpersonal trauma) and current factors (fears and concerns, prenatal health behavior and attachment, mental health, help-seeking, wishes for the future). Twenty-three teens were interviewed over 18 months. Outcomes of this study revealed that teens generally felt very positively about their pregnancies and

regarded this event to be a portal to a new and better life, and changed their health behavior and social activities accordingly. Teens also showed a high degree of resilient beliefs and behaviors, a spontaneous finding, maintaining hope and optimism and forming concrete plans for future parenting and stability. They also expressed much concern and fear about the lack of material resources, particularly housing. Mental health problems increased with exposure to trauma and stress. The salient finding here was that as interpersonal trauma exposure accumulated, the more positively teens felt about their pregnancies, the more resilient were their beliefs and behaviors, and the more mental health problems they endorsed. Teens with less exposure to trauma and stress had somewhat less positive views of pregnancy, more family and current support, better relationships with parents, more fears and concerns about their pregnancies, were somewhat less resilient, and had fewer mental health problems. Thus, teens who seem most enthusiastic and prepared are often those who have experienced the greatest amount of trauma and disrupted attachment, both of which may affect parenting capacity. Programmatic and policy responses focused on the need to include teens' historical narrative and a tableau of their current support in planning to assist them, rather than instantiating interventions which extend from a dominant discourse about what they need to succeed as parents.

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Chapter 1: Statement of the Study Issue

Purpose

Despite recent declines in the United States (J. A. Martin, Hamilton, Osterman, Driscoll, & Mathews, 2015), teen childbearing has been routinely framed as a social problem in medical, nursing, and social science literature and has been viewed as such since the mid 20th century. This has occurred partly as a function of shifting discourse on the long-term impact of teens' psychological and biological maturity (Koffman, 2012). It has also stemmed from "selective attention"—increased surveillance of pregnant teens' individual behavior and disparities in psychosocial outcomes in comparison to older women, without due focus on the underlying causes of these disparities (Duncan, 2007; Mollborn & Morningstar, 2012; SmithBattle, 2009). This problematization is ascribed to perceived "failings" at both the individual and societal level (Breheny & Stephens, 2010). As D. M. Kelly (1996) and McDermott and Graham (2005) point out, this has emerged through three related discourses: teens are perceived to be an at-risk group: young, usually unmarried, from disadvantaged backgrounds, a product of a social location in which psychosocial stressors are endemic and transmitted intergenerationally, and a financial drain on, and thus a threat to society at large. Although there is evidence from quantitative investigations of proximal and distal negative outcomes for both teen mothers and their infants (e.g., Jaffee, Caspi, Moffitt, Belsky, & Silva, 2001; National Campaign to Prevent Teen and Unwanted Pregnancy [NCPTUP], 2013; Noria, Weed, & Keogh, 2007), there is increasing indication that these outcomes are more likely accounted for by entrenched poverty (Breheny & Stephens, 2010; Mollborn & Morningstar, 2012; SmithBattle, 2009; Weinstein, 1998) in conjunction with some risk

factors particular to teens (Barn & Montovani, 2007; Kaiser & Hays, 2005; Payne & Anastas, 2015). Teens themselves though, hold different and at times contrasting views of their pregnancies from those who espouse the dominant discourse. This finding has emerged from qualitative work which suggests that despite vulnerabilities associated with teen pregnancy and parenting, teens often regard their pregnancies to be a positive force in an otherwise bleak landscape and are willing and able, with proper support as Rains, Davies, and McKinnon (1998), Rolfe (2008), Shanok and Miller (2007), and Solivan, Wallace, Kaplan, & Harville (2015) have found, to "step up to motherhood."

Teens who become pregnant and decide to keep and rear their infants are often a disparaged group whose voices are rarely heard, while they are concurrently the focal point of pejorative, morally-driven social and political narratives concerning the adverse effects of "children having children." Young, impoverished pregnant women may be at some disadvantage in preparing for motherhood, yet are held to the standards of what is considered "good mothering practice" by a hegemonic discourse modeled on women with considerably greater means and support (Barcelos & Gubrium, 2014; Breheny & Stephens, 2010; Coll, Surrey, & Weingarten, 1998; Duncan, 2007; Geronimus, 2003; D. M. Kelly, 1996; McDermott & Graham, 2005; Wilson & Huntington, 2006). This discourse is exacerbated by the intersectionality of teen pregnancy, poverty, and race, as most teens who become pregnant come from disadvantaged backgrounds (Barcelos & Gubrium, 2014; Furstenberg, 2007; Kennedy, 2005), are disproportionately of color (Geronimus, 2003; Hoffman, 2008a; J. A. Martin et al., 2015), and are overrepresented in foster care (Haight, Finet, Bamba, & Helton, 2009; Pryce & Samuels, 2010; Svoboda et al., 2012). And if teen parenting is vilified and this vilification becomes an entrenched

aspect of the dominant paradigm with respect to policy and resource dissemination, then teens will not be supported adequately, will not have the resources they need to succeed, and will be increasingly surveilled, providing fuel to the discursive fire.

Once teen pregnancy became "problematized," the outcomes of teen pregnancy for mother, infant, and developing child became subject to exploration (see Hoffman, 2006; NCPTUP, 2013; Noria et al., 2007). These outcomes include critical social indictors: maternal income, educational attainment, employment prospects, and mental and physical health (Barlow et al., 2011; A. Y. Black, Fleming, & Rome, 2012; Boden, Fergusson, & Horwood, 2008; Hobcraft & Kiernan, 2001; S. J. Kulkarni, Kennedy, & Lewis, 2010; NCPTUP, 2013, Noria et al., 2007, Schuyler Center for Analysis and Advocacy [SCAA], 2008). Teen pregnancy that results in birth has also been associated with negative proximal and distal consequences for children, the former of which reflect many of the prenatal, perinatal, or neonatal objectives[1] defined in *Healthy People 2010* (U.S. Department of Health and Human Services, Centers for Disease Control and Prevention [USDHHS], 2010).

Proximal consequences associated with teen pregnancy and childbearing in the scientific literature are low birth weight and preterm birth (Chen et al., 2007; Da Silva et al., 2003; Fraser, Brockert, & Ward, 1995; Gortzak-Uzan, Hallack, Press, Katz, & Shoham-Vardi, 2001; Hidalgo, Chedraui, & Chávez, 2005; Keskinoglu et al., 2007; Ketterlinus, Henderson, & Lamb, 1990; Koniak-Griffin & Turner-Pluta, 2001; Lao & Ho, 1997, 1998; Pevalin, 2003; Quinlivan & Evans, 2004; J. Roth, Hendrickson, Schilling, &

[1] Prenatal refers to the period between conception and delivery; perinatal or neonatal, between the onset of labor and one month after delivery (Goldenberg, Andrews, Yuan, MacKay, & St. Louis, 1997).

Stowell, 1998; SCAA, 2008), and fetal and infant[2] mortality (Chen, Wen, Fleming, Yang, & Walker, 2008; Conde-Agudelo, Belizán, & Lammers, 2005; De Vienne, Creveuil, & Dreyfus, 2009; Jutte et al., 2010; Phipps, Blume, & DeMonner, 2002). In longitudinal studies, children of teen mothers have been found to experience deficits in cognitive, academic, mental health, and psychosocial domains when compared to children of older mothers (Carothers, Borkowski, & Whitman, 2006; Jaffee et al., 2001; Jutte et al., 2010; Lefever, Nicholson, & Noria, 2007; Sieger & Renk, 2007).

Whether young age, psychosocial factors, or some interaction of these factors is most predictive of short and long-term outcomes for teen mothers and their children remains a subject of intense debate. As with all attempts to explain the negative outcomes of teen pregnancy and childbearing, we encounter challenges common to social science research—the impact of potential selection and endogeneity bias (Mollborn, 2007; Mollborn & Morningstar, 2009; Stone & Rose, 2011). In the case of selection bias, the exploration of specific factors (e.g. educational or economic outcomes, rates of depression among teens who give birth) is biased by unobserved or unmeasured heterogeneity in the groups in question. Regarding endogeneity bias, we encounter the challenge of realizing the *ceterus paribus* assumption: exploring the impact of one factor, in this case young maternal age itself, by holding constant the antecedent psychosocial conditions often experienced by the criterion group: pregnant and parenting teens (Brooks-Gunn & Furstenberg, 1986; Fletcher & Wolfe, 2008; M. S. Kearney & Levine, 2012; Manlove, Terry-Humen, Mincieli, & Moore, 2008; Mollborn, 2007; Mollborn & Morningstar, 2009; Saunders, 2003; Tanner et al., 2015). These antecedent conditions may have had mediating, moderating, or independent effects on the incidence of early

[2] Fetal, perinatal, and neonatal (prenatal and up to 28 days postbirth), and infant (up to 1 year).

pregnancy as well as the short- and long-term outcomes of those pregnancies. This assumption was upheld to a degree in the longitudinal work conducted with teen mothers living in long-standing poverty in Baltimore (Furstenberg, 2007). The study traversed three decades and revealed that although teen parenting added to the challenges poor women faced it did not exacerbate the social and economic disadvantage faced by all members of this community in any discernable way.

Too often, research paradigms and the prevailing discourse around teen pregnancy contain a persistent bias toward teens' individual, "deviant" characteristics or built-in deficiencies, as a function of their young age and "typical" teenaged behavior (Breheny & Stephens, 2010; Mollborn & Dennis, 2012). These factors are cited as the reasons for the negative findings from empirical explorations of the consequences of teen pregnancy with respect to teens' own futures, their ability to parent, and their children's development (Breheny & Stephens, 2007; Lawlor & Shaw, 2002; Mollborn, 2007), augmenting the likelihood of stigmatizing young women who decide to bear children (Solivan, et al., 2015). While teens in general may be more prone than adults to risk behavior (Eaton, 2010), the lack of attention to teens' internal resources and to deficits in external resources, and how these assets would facilitate teens' healthy pregnancies and bonding to their unborn infants is an impetus for the current study.

Despite empirical attempts to consider and adjust for various psychological, biological, and socioeconomic factors associated with early childbearing that may account for short and long-term outcomes, teen pregnancy and parenthood is still associated in the quantitative literature with compromised birth outcomes, lower educational attainment, and developmental problems for children without a viable

explanation of how "teen" status contributes to these outcomes. The only exceptions are studies which investigated different age groupings and found greater deficits associated with the youngest teen mothers, ages 10-13 (see Cunnington, 2001) and 10-15 (Cooper, Leyland, & Alexander, 1995). At best, much of the variance in these findings may be accounted for by interactions between elements that have not been isolated empirically from the existing "mix" of possible facilitating factors. Three such factors are teens' disproportionate exposure to cumulative trauma and other forms of adversity, the mental health consequences associated with these experiences, and their health and health-related behavior during pregnancy. These elements and the interactions between them are understudied in teens across the board, both quantitatively and qualitatively. In older mothers, these factors are predictive of impairments in gestational health through behavior and through alterations in the stress response system that can harm the fetus (Field et al., 2003; Field & Diego, 2008; Rondó et al., 2003; Thomson, 2007; Wadhwa, Sandman, & Garite, 2001; A. D. Weinstein, 2016), and that may, in turn through epigenetic alterations, manifest in the stress response system of their children into young adulthood (Bowers & Yehuda, 2016; Gillespie, Phifer, Bradley, & Ressler, 2009).

While multivariate explorations into factors affecting gestational outcomes are called for, the current study is a qualitative exploration of teens' perspective on the meaning of their pregnancies in the context of cumulative adversity, and the risk factors and protective processes that may affect their feelings about their health behavior and their infants and during pregnancy. Duncan (2007) and Graham and McDermott (2005) both note that qualitative work has not been centrally positioned to provide evidence for the enhancement of policy or programmatic efforts directed at pregnant and parenting

teens. Qualitative work does inherently contradict quantitative study; in fact, as Duncan (2007) argues, it can provide explanations for the broad gap between the personal and the political: teen mothers generally see their pregnancies in a positive light and as a source of enhanced competence, but it is the conclusions drawn from quantitative work investigating the psychosocial sequelae of teen births, considerably less sanguine for the prospects of teens and their children, that have been generally positioned to inform policy and program development (Graham & McDermott, 2005; Wilson & Huntington, 2006).

Statement of the Problem

The overarching premise of this study is that *the prenatal period* is essential, ab ovo, from a developmental perspective due to the potential impact on both the proximal health of the fetus and related gestational outcomes, and on distal physical and mental health outcomes in later life. Prenatal health as well as the mother-fetus relationship may be affected by antecedent psychosocial circumstances common in the histories of pregnant and parenting teens. A richer understanding of factors potentiating or protecting against poor prenatal health in teens, a higher-risk group, may have far-reaching implications and would be facilitated by a multidisciplinary approach to enhancing intervention science and policy.

Prenatal health behavior, attachment to the fetus, interpersonal trauma exposure, and mental health problems, particularly depression, dissociation, and posttraumatic stress disorder (PTSD), can all affect the health of a pregnant woman and her fetus. The impact of these factors has been investigated quantitatively in older higher risk women (Alhusen, Lucea, Bullock, & Sharps, 2013; Seng, Sperlich, & Low, 2008, Morland et al., 2007; Rosen, Seng, Tollman, and Mallinger, 2007), but not with teens. Inner city teens

are disproportionately exposed to interpersonal trauma, or adverse childhood experiences (ACEs[3], Felitti et al., 1998; Felitti & Anda, 2010) (e.g., including all forms of child abuse, involvement in foster care, having substance using, mentally ill, incarcerated parents, traumatic loss, or witnessing interpersonal violence). The accumulation of ACEs and stressors and living in low resource communities, termed cumulative disadvantage, or adversity (see Furumoto-Dawson, Gehlert, Sohmer, Olopade, & Sacks, 2007; Hatch, 2005; Nurius, Logan-Greene, & Green, 2012; Shonkoff, Boyce, & McEwen, 2009; Shonkoff et al., 2012; Wickrama, Conger, & Abraham, 2005) renders a person at greater statistical risk for poor outcomes across a plethora of health and developmental indicators (Academy of Pediatrics, 2012; Chu & Lieberman, 2010; De Bellis, 2001; Dube, Felitti, Dong, Giles, & Anda, 2003; Felitti & Anda, 2010; Felitti et al., 1998; Furumoto-Dawson et al., 2007; Gunnar & Vasquez, 2006; W. W. Harris, Lieberman, & Marans, 2007; Larkin, Shields, & Anda, 2012; Nurius et al., 2012; Shonkoff et al., 2012; Sprang, Katz, & Cook, 2009; Springer, Sheridan, Kuo, & Carnes, 2007).

Ecologically, most pregnant teens in the U.S. live at the lower end of the socioeconomic strata (Furstenberg, 2007; NCPTUP, 2010b, Noria et al., 2007), often in high-crime, low-resource neighborhoods. They may experience elevated biological, familial, and environmental risk for poor prenatal health and reduced accessibility to material resources in general (Mollborn, 2007), and health services (Brubaker, 2007; Carlton & Poole, 1990; S. J. Kulkarni et al., 2010; SCAA, 2008). In other words, pregnancy itself can be a *stressor* for teens. Ungar (2000, 2004) highlights a vital point though, that is relevant to teens who become pregnant as well as other marginalized

[3] "ACE" refers to interpersonal trauma experienced before age 18, and "adversity" or "disadvantage" to other environmental stressors often accompanying ACEs. The acronym will be used with respect to child abuse in studied that explored child abuse if the categories include those investigated in the ACE study.

youth. Agreeing with Arrington and Wilson (2000) and Kaplan (1999), he reminds us that normative conceptions of socially undesirable outcomes, such as teen pregnancy may be defined subjectively by an individual or group as desirable. Teens, as much of the qualitative literature supports, often view their pregnancies as both a stressor *and* a protective factor that galvanizes them to alter a dangerous trajectory and strive for a better life. Thus, although the highest risk teens[4] and their children are still of greatest concern, there is a good deal of variability in the outcomes of teen pregnancies. This variability may reflect unmeasured heterogeneity in this group of young women, as discussed by Mollborn (2007), of access to resources (Mollborn & Morningstar, 2012), of differences in behaviors during and support throughout pregnancy (Neiterman, 2012; Rosengard, Pollock, Weitzen, Meers & Phipps, 2006; Shanok & Miller, 2007), or, differences in level of resilience (Bernard, 1995; Masten, Best, & Garmezy, 1990; Hauser, Allen, & Golden, 2006; Kennedy, Agbényiga, Kasiborski, & Gladden, 2010; Ungar, 2004). As Kennedy et al. (2010) argue, exposure to cumulative disadvantage does not necessarily put an individual on a deterministic course. Pregnant teens should not be viewed solely as victims of circumstance but also as having adaptive capacity (Brand, Morrison, & Down, 2015; Breen & McLean, 2010; Furstenberg, 2007; Kennedy et al., 2010; Neiterman, 2012; S. J. Kulkarni et al., 2010; Rolfe, 2008, Solivan et al., 2015).

A woman's prenatal health choices and actions have received increased attention across disciplines involved in the effort to improve reproductive health outcomes (Beck et al., 2002; Fowles, Murphey, & Ruiz, 2011; Lindgren, 2001, 2003, 2005; Olds, 2006;

[44] High-risk pregnant teens are defined for the present study as pregnant teens who live in the lowest income and highest infant mortality zip codes in the five boroughs of New York City, or have had contact with the child welfare system.

Reading, Campbell, Cox, & Sledmere, 1982; A. D. Weinstein, 2016; Thomson, 2007). This study was initially designed as a multivariate investigation of the impact of several other factors on this outcome, including ACE exposure, chronic posttraumatic stress (PTS), and prenatal attachment. Preliminary findings from the proposed multivariate study were anecdotally surprising, given the outcomes of studies on samples of older high-risk women (see Seng et al., 2008; Morland et al., 2007). The use of well validated instruments to assess these constructs revealed that although teens in this study experienced high rates of ACE exposure and mental health problems, they obtained unexpectedly high scores on prenatal health and prenatal attachment measures.

In addition, and possibly related, was the quality of responses to the two initial open-ended questions at the end of the survey. Teens' responses revealed that most viewed their pregnancies as a positive, life-changing transition in state or role (Elder, Johnson, & Crosnoe, 2003) in the context of cumulative and often severe adversity. As Furstenberg (2007) and Borkowski, Whitman, and Farris (2007) found, working with pregnant and parenting teens in the Notre Dame Adolescent Parenting Project (NDAPP), some teens do escape the risks usually associated with youthful parenthood. The current study aimed to shed some light on teen's perspective on their pregnancies and prospective motherhood, during pregnancy itself. Of interest was to what degree and under what psychosocial conditions teens viewed their pregnancy as a watershed event, or as Rolfe (2008) proposed, a road to positively attaining adult status. Qualitative studies have provided teens with a distinctive voice, one that allows them to develop an alternative to stigmatizing narratives. As these studies have shown, most teen mothers deeply desire to succeed as mothers and a pregnancy may serve to motivate them to

"better themselves" on behalf of their babies, by improving their prenatal health and ceasing unhealthy or dangerous behavior (Aparicio, 2016; Aparicio, Pecukonis, & O'Neal, 2015; Barcelos & Gubrium, 2014; Breen & McLean, 2010; Connolly, Heifetz, & Bohr, 2012; Dornig et al., 2009; A. Knight, Chase, & Aggleton, 2006; Leadbeater & Way, 2001; Neiterman, 2012; Rolfe, 2008; Rentschler, 2003; Shanok & Miller, 2007; Solivan et al., 2015).

As Brand et al. (2015), Breen and McLean (2010), Hess, Papas, and Black, 2002; Kennedy (2005), Kennedy et al., (2010), Neiterman (2012), and Solivan et al. (2015) found in their qualitative inquiries into markers of resilience during teen pregnancy, becoming pregnant as a teen can facilitate development by presenting new opportunities for teens to care for themselves, consider their futures, and to seek safety and stability. These studies also examined whether teens specifically stated that their pregnancies set them on a course to a healthier and safer life by providing them with a concrete deterrent to engaging in self-destructive behavior patterns (e.g., substance use, fighting, eating junk food, smoking, alcohol use, school dropout, unprotected sex), behavior that may have been adaptive to the challenges of their environments (Geronimus 1996; Farris, Smith, & Weed, 2007; Kennedy et al., 2010; Lawlor & Shaw 2003; Ungar, 2000, 2004).

Until the last two decades, there had been sparse data on the subjective experiences of pregnant inner-city teens and how their life histories and relationship context affect how they behave and what they feel during their pregnancies. As Furstenberg (1991) noted, the prevailing paradigm, quantitative date gathering, did not provide a platform for exploring the richness of teens' personal experiences, or, as Flanagan, McGrath, Meyer, and Coll (1995) observed, for exploring how the

developmental factors and constraints of adolescence may affect teens' perception of their new parenting role. The past twenty years have seen an upsurge in gathering qualitative data about pregnant and parenting teens. These explorations have added to and enriched the current literature by elucidating the value and perhaps psychological advantage of these pregnancies in the context of often severe deprivation and vilification, and offering a contrasting view of teen mothers' strengths. These studies, grounded theory or drawing methodology from grounded theory (Flanagan et al., 1995; Kennedy et al., 2010; Rolfe, 2008; Whitley & Kirmeyer, 2008), phenomenological (Aparicio, 2016; Aparico et al., 2015; Montgomery, 2002; Pryce & Samuels, 2010; Seamark & Lings, 2004; Williams & Vines, 1999), narrative (Barcelos & Gubrium, 2014; Brand et al., 2015; Breen & McLean, 2010; Dornig et al., 2009; Graham & McDermott, 2005; Neiterman, 2012; Rains et al.,1998; Rosengard et al., 2006), and reviews, both systematic and descriptive (Anastas, 2017; Connolly et al., 2012; Spear & Lock, 2003; Wilson & Huntington, 2006), have challenged the prevailing view of teen motherhood as unequivocally problematic, and of teen mothers themselves as deviant and at serious disadvantage as parents.

Qualitative studies on teens' perception of their pregnancies run the gamut from general "perceptions" of pregnancy and its challenges (Herrman, 2008; Herman & Waterhouse, 2011; Mashala, Esterhuizen, Basson, & Nel, 2012; Rentschler, 2003; Tanner et al., 2013), to what teens wanted from planned pregnancies (Montgomery, 2002), growing up and taking responsibility (Rains et al., 1998; Rolfe, 2008; Shanok & Miller, 2007), assessing perceived losses and advantages (Rosengard et al., 2006; SmithBattle, 2009), educational concerns (SmithBattle, 2007), amending past attachment and

parenting deficits (A. Knight et al., 2006; Aparicio, 2016; Aparicio et al., 2015), risk and resilience (Breen and McLean, 2010; Hess et al., 2002; Kennedy, 2005; Kennedy et al., 2010; Solivan et al., 2015), the impact of interpersonal trauma (Kennedy, 2005; Kennedy et al., 2010; Madigan, Wade, Tarabulsy, Jenkins, & Shouldice, 2014; Renker, 2002; Williams & Vines, 1999), stigma (Brand et al., 2015; Lawler & Shaw, 2002; Whitley & Kirmeyer, 2008) adopting a maternal identity (Aparicio et al., 2015; Mackintosh & Callister, 2015; Restschler, 2003) and challenging negative views of pregnant and parenting teens (Barcelos & Gubrium, 2014; Geronimus, 2003; D. M. Kelly, 1996).

The current study will expand this literature by developing a grounded theory of how, in the teen's own words, exposure to cumulative disadvantage and mental health challenges may have affected their decisions around pregnancy health and behavior, their feelings about their babies, the transition to motherhood, and what protective factors may alter an expected negative trajectory. The relationship between these risks and protective factors, current views of pregnancy, and prenatal health and attachment has not been explored qualitatively.

The Importance of Prenatal Health Behavior

Explorations of maternal prenatal health and behavior (see Beck et al., 2002; Gluckman, Hanson, Cooper, & Thornburg, 2008; Fowles et al., 2011; Kaiser & Hays, 2005; Lindgren, 2001, 2003, 2005; Reading et al.,1982; L. O. Walker, Cooney, & Riggs, 1999), prenatal attachment (e.g., Alhusen, 2008; K.C. Bloom, 1995; Brandon, Pitts, Denton, Stringer, & Evans, 2009; Condon & Corkindale, 1997; Cranley, 1981; Yarcheski, Mahon, Yarcheski, Hanks, & Cannella, 2009), and prenatal stress (e.g., Bolten et al., 2011; Bowers & Yehuda, 2016; Class, Lichtenstein, Längström, & D'Onofrio,

2011; Holub et al., 2007; Lobel et al., 2008; McEwen, & Gianaros, 2010; Rondó et al., 2003; Thomson, 2004; 2007; Wadhwa et al., 2001; A. D. Weinstein, 2016) have provided support for the hypothesis that the mother-infant relationship begins before birth. Consistency of the relationship between the prenatal environment and later health, despite the temporal separation between pregnancy and the manifestations of these outcomes prompted increased interest in the fetal origins of health and disease and the articulation of the developmental origins of health and disease model (DOHaD, Barker, 1995, 2004, 2007; Barker et al., 1993; Barker & Osmond, 1986; Barker, Osmond, Golding, Kuh, & Wadsworth, 1989; Burdge & Lillycrop, 2010; Gillman, 2005; Gluckman, Hanson, & Beedle, 2007; Gluckman et al., 2008). The DOHaD model proposes that prenatal environment: maternal overall health, health behavior, and stress levels affect fetal health and a range of health and mental health outcomes in later life. While gestational outcomes were not assessed as part of the current study, understanding the prenatal health and psychosocial factors that may have an impact on these outcomes in a vulnerable group of pregnant women is of value.

Significance of the Study: Interpersonal Trauma and Pregnancy in Teens

High levels of perceived stress, mental health problems, and health-interfering behaviors are comparatively more prevalent in pregnant women who have had ACE exposure, of any age, and may increase the likelihood of inadequate prenatal health and consequently of giving birth to and caring for a newborn that may be low birth weight, preterm, growth-restricted, or small for gestational age (SGA). Each threat to prenatal health launches its own trajectory of risk. Quantitative studies that have investigated the outcomes of teen childbearing underscore the potential risk behavior of pregnant teens,

although few study the specific effects of these behaviors and potential teratogens longitudinally. They focus on their comparatively high rates of smoking, alcohol, and substance use (Bottorf et al., 2014; Kaiser & Hays, 2005; Kingston, Heaman, Fell, & Chalmers, 2012; Koniak-Griffin & Turner-Pluta, 2001), poor nutrition (Burchett & Seeley, 2003; Flynn, Budd, & Modelski, 2008; Ketterlinus et al., 1990; Wise et al., 2015), and disproportionate rates of high-risk sexual behavior and contracting sexually transmitted infections (STIs, Bunnell et al., 1999; Niccolai, Ethier, Kershaw, Lewis, & Ickovics, 2003; Santelli, DiClemente, Miller, & Kirby, 1999).

ACE exposure and domestic and dating violence are particularly common among teens (Finkelhor, Turner, Ormord, & Hamby, 2009; Gerson & Rappaport, 2013), particularly those who bear children (Center for Impact Research, 2000; Covington, Justason, & Wright, 2001; DeRosa & Pelcovitz, 2006; Herrenkohl, Herrenkohl, Egolf, & Russo, 1998; Kennedy & Bennett, 2006; S. J. Kulkarni et al., 2010; Stevens-Simon & McAnarney, 1994). This is partly due to teens' exposure to both family of origin as well as partner violence and that teens are more likely than adult women to report violence during pregnancy (Taillieu & Brownridge, 2010). Women with trauma exposure, past or current, may find obstetric care retraumatizing and may avoid timely medical care (Bohn & Holz, 1996; Seng et al., 2011; Shieh & Kravitz, 2006). In the context of current interpersonal violence (IPV), pregnant women may experience inadequate weight gain from reduced nutritional intake (Bohn & Holz, 1996; Curry et al., 1998; M. H. Kearney, Munro, Kelly, & Hawkins, 2004; Moraes, Amorim, & Reichenheim, 2006; Nunes et al., 2010). There is a growing body of empirical work (e.g., Lopez, Konrath, & Seng, 2011; Morland et al., 2007; Quinlivan & Evans, 2001; Seng, Low, Sperlich, Ronis, & Liberzon,

2011), reviews (Thomson, 2004; 2007) and comprehensive publications, notably by Kathleen Kendall-Tackett (2013) and Anne Weinstein (2016), highlighting the hazards of ACE exposure for the stress response system, mental health, and health behavior of pregnant women.

Mental health problems associated with histories of, or current exposure to IPV include PTSD and depression (Briere, Kaltman, & Green, 2008; Gerson & Rappaport, 2013; B. L. Green et al., 2000; Kendall-Tackett, 2007; 2010; Kessler, 2000; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; M. R. Kulkarni, Graham-Berman, Rauch, & Seng, 2011; Widom, 1999), that may continue or worsen during pregnancy (Morland et al., 2007; Rosen et al., 2007; Seng et al., 2010; A. D. Weinstein, 2016). Stress and mental health problems common in the lives of pregnant high-risk teens and which predate pregnancy (Mollborn & Morningstar, 2012) can exacerbate poor prenatal health (Quinlivan & Evans, 2001; Quinlivan, Petersen, & Gurrin, 1999; Renker, 1999).

Teens who become pregnant and decide to keep their babies are coping with the dual challenges of adolescence and pregnancy. Contextualizing these challenges against a backdrop of poverty and interpersonal violence highlights the need to assess which teens may be at greatest risk (DeRosa & Pelcovitz, 2006). Providing these young women with guidance in the form of prenatal health programs designed to provide greater access to resources, including assistance obtaining safe and affordable housing returning to school (Hudgins, Erickson, & Walker, 2014; Hulsey, Wood, & Rangarajan, 2005; Mollborn, 2007; Odell, 2017) may moderate these outcomes (Koniak-Griffin, Mathenge, Anderson, & Verzemneiks, 1999; S. J. Kulkarni et al, 2010; Mayers & Siegler, 2004; Quinlivan & Evans, 2004). Of equal importance is identifying individual characteristics and

experiences of teens that may foster positive views of pregnancy and sound prenatal health, and under which conditions.

Prenatal Attachment in Pregnant Teens

The attachment relationship between teen mothers and their infants and toddlers has received increased attention in the last several decades (H. N. Bailey, Moran, & Pederson, 2007; S. C. Flaherty & Sadler, 2011; Hans & Thulen, 2009; Lyons-Ruth & Block, 1996; Madigan, Moran, & Pederson, 2006; Madigan, Vaillancourt, McKibbon, & Benoit, 2012; Mayers & Siegler, 2004). In contrast, pregnant teens' attachment to their unborn infants, or prenatal attachment, has been an understudied area (K. C. Bloom, 1995; Feldman, 2012). As a construct, prenatal attachment is comparable but not equivalent to mother-infant attachment and is emblematic of the activation of the caregiving system (Solomon & George, 1996; J. Walsh, 2010). The study of factors that predict a pregnant woman's attachment to her unborn infant may provide insight into other aspects of pregnancy, including prenatal health (Lindgren, 2003, Alhusen, 2011), adopting a maternal identity (Macintosh & Callister, 2015), and determinants of the postbirth relationship for women of all ages (Benoit, Parker, & Zeanah, 1997; Condon & Conkindale, 1997; Laxton-Kane & Slade, 2002; Murphy, Steele, Dube et al., 2014; Pajulo, Savonlahti, Sourander, Piha, & Helenius, 2001; Priel & Bessser, 2000; Siddiqui, Hägglöf, & Eisemann, 2000; Yarcheski et al., 2009). As such, this construct has both theoretical and clinical importance.

The Nurse-Family Partnership

Hatch (2005) notes that even in cases of early and severe disadvantage, which is the case with most of the young mothers-to-be in the current and related studies, informal

as well as formal protective factors and opportunities are available. While an informal protective factor might include a loving and supportive parent, grandparent, teacher, school program, or therapist in the face of family violence and adversity, a formal opportunity can include an intervention designed to assist teens at this critical juncture. One such intervention is nurse home visiting. This study was conducted in collaboration with the New York City Nurse-Family Partnership (NYC-NFP or NFP), a national program of home visiting for vulnerable first-time pregnant women. *Home visiting*, defined as purposeful visitation in the home by helping professionals, is recognized as a successful secondary preventive intervention. Comprehensive reviews of emerging practices (for example, see Paulsell, Avellar, Martin, & Del Grosso, 2011) have indicated home-visiting models reduce child abuse reports and improve long-term family functioning. The home-visiting model with the best evidence base was developed by David Olds in 1977 (Olds, 1980, 1982).

Working with very low-income families at a Baltimore day care center, Olds (1980, 1982; Olds, Henderson, Tatelbaum, & Chamberlin, 1986) witnessed the manifold needs of enrolled families and the developmental consequences of maltreatment and neglect. Olds (2006) described children's attachment insecurity as well as developmental and behavioral problems, and the grave contextual risk factors faced by their parents (e.g., high crime rates, interpersonal violence, substance use, and unemployment). Struck by the dilemma of promoting secure attachment between parents and infants in this context, Olds and his team developed an ecologically-informed preventive intervention designed to address the continuum of concern from the family to the community. Nurses were selected because of their formal training in women's health and competence in

addressing the physical and emotional complications of pregnancy, labor, and neonatal care. The mental health needs of enrollees and the need to enhance the mental health component of the NFP, became clearer with time (Olds, Sadler, & Kitzman, 2007).

Olds, Kitzman, Cole, and Robinson (1997) described the theoretical basis of the NPF practice model fully. The NFP is informed by ecological theory (Bronfenbrenner, 1977) in that nurses assess an enrollee's present life circumstances on multiple ecological levels and work toward reduced risk at each level to improve long-term outcomes. It is also based on self-efficacy theory (Bandura, 1977), whereby nurses emphasize the achievement of small personal goals, which, accruing slowly, would putatively strengthen mothers' confidence in coping with future problems and promote behavior change. Lastly, it is based on attachment theory (Bowlby, 1969, 1973, 1980). This component of the NFP was designated to foster a therapeutic alliance between nurses and new mothers, with nurses modeling and promoting secure mother-infant attachment.

The NFP home visiting model has three phases, each with a corresponding goal. Nurses adhere to rigorous criteria for conducting the intervention. Fidelity to the model is reinforced by regular training and is credited with enhancing program success (Olds, 1980, 1982, 2006). First, the prenatal phase addresses potential risks of prenatal alcohol, tobacco, and drug exposure and poor dietary health for both proximal gestational outcomes and infants' more distal developmental trajectory. This phase supports positive pregnancy outcomes by improving maternal physical health behavior and reducing substance use. Second, the immediate postnatal phase promotes sensitive and competent care of infants, increasing the likelihood of attachment security and mitigating risk for child maltreatment and injury. Third, is a longer-term phase, which continues until

infants are two years of age to attenuate developmental risk and improve parents' life course (Olds, 2006; Olds, Henderson, & Kitzman, 1994).

The focus of Phase I, the prenatal phase, is didactic and health-related. Olds (1980, 1982, 2006) noted the risks of prenatal alcohol, tobacco, and drug exposure and poor dietary health for gestational outcomes and infants' developmental trajectory. He surmised that if nurses coordinated with physicians and midwives to help mothers with their pre-and postnatal health behaviors, gestational outcomes for pregnant women and their newborns could be improved. With respect to the post birth relationship, poor prenatal health (Zelenko, Lock, Kraemer, & Steiner, 2000; Zhou, Hallisey, & Freyman, 2006), low birth weight and preterm birth (Brayden, Altemeier, Tucker, Dietrich, & Vietze, 1992; Sidebotham & Heron, 2003; Spencer, Wallace, Sundrum, Bachus, & Logan, 2006), and neurological and developmental delays (Brayden et al., 1992; Famularo, Fenton, & Kinscherff, 1992; Rosenberg, Smith, & Levinson, 2007) have been investigated as harbingers of child abuse and neglect, due to the increased likelihood of developmental and behavior problems in infants.

This study examined perspectives of pregnancy and prenatal health of inner city pregnant teens enrolled in the NYC-NFP. It bridged disparate literatures and research paradigms, quantitative and qualitative, and expanded current knowledge about factors that might affect the quality of the mother-fetus relationship for these young women. Given the wide variation in social location between interviewers in this study (i.e., white, middle class women) and the teens, none of whom were white, and who were living in some of the lowest income, highest infant mortality zip codes in New York City, a social constructivist stance formed the framework for this investigation. Observations made and

memos written during the study and the data analysis included ways in which the interview phenomena were mutually created by interviewers and teens, and, what types of assumptions might interfere with the coding and validity of the findings (Bryant & Charmaz, 2007; Charmaz, 2014; Kennedy, 2005; Sword, 1999).

Implications for Social Work and Intervention Science

Beginning with Jane Addams' presence at the first White House Conference on Children in 1909 and the subsequent formation of the Children's Bureau, social workers have been integrally involved with the welfare of children (Fulcher & McGladdery, 2011; Karger & Stoesz, 2006). Two such areas of social work as a discipline may make a major contribution to the challenge of understanding and improving the health of pregnant teens. The first area involves direct practice: working at the level of the individual with respect to engagement, empowerment, and fostering resilience. Social workers are uniquely prepared to engage and develop therapeutic, trusting relationships with young women who, due to their histories, are likely to be guarded and avoidant of the kind of services that may assist them (S. J. Kulkarni et al., 2010; W. B. Smith, 2011). When teens resolve to give birth, they may have to make concomitant decisions regarding their education, employment, and relationships, and these choices may be scrutinized and judged due their age and vulnerability. Helping them understand how various forms of oppression have affected them due to their young age, ethnicity, and poverty can help reduce shame and inadequacy (Barcelos & Gubrium, 2014; Breen & McLean 2010; Brubaker, 2007; D. M. Kelly, 1996; S. J. Kulkarni et al., 2010; SmithBattle, 2003). In addition to these practical attributes, social workers are oriented toward identifying and enhancing resilience. Identifying factors that raise and lower risk potential, particularly in

the teens' own words, may yield a positive impact on the outcomes of pregnancy (Kennedy et al., 2010; S. J. Kulkarni et al., 2010; Solivan et al., 2015).

Second, social workers are also uniquely prepared to identify internal as well as external factors that increase vulnerability as well as the mental health consequences of ACEs and other forms of adversity, under-addressed in pregnant teens (Kennedy et al., 2010; Quinlivan & Evans, 2001; Renker, 1999; Williams & Vines, 2001). Until recently, prevailing dialogues have traditionally viewed traumatic stress as an isolated clinical phenomenon, underestimating its impact on behavior and development, but also without a needed ecological-transactional perspective: consideration of interactions between multilevel factors that may be triggers for, or offer protection against its expression (Luthar, Cicchetti, & Becker, 2000; W. W. Harris et al., 2007; Shonkoff et al., 2009). It is also a challenge to principles of distributive justice when members of a disempowered group are disproportionately harmed by ACE exposure and cumulative disadvantage from the outset, compromising their chances to succeed as parents and otherwise (W. W. Harris et al., 2007; Hatch, 2005; Nurius et al., 2012; Wickrama, Merten, & Elder, 2005).

Third, social workers make a considerable contribution with respect to knowledge development to inform advocacy. High-risk pregnant youth, particularly those who have had contact with the child welfare system are underserved, partly because their needs across the biopsychosocial spectrum are not adequately known. Although nursing and other disciplines have contributed the most to qualitative inquiry in the last two decades (Anastas, 2017) social work as a discipline has contributed extensively to quantitative inquiry and is in a unique position to enrich qualitative work and the debates that extend from it. For example, Chapin Hall's Regional Midwest longitudinal follow-up on the

adult functioning of 700 transitioning and former foster care youth, commissioned between 1998 and 2006 by the Illinois Department of Children and Family Services (Bilaver & Courtney, 2006; Courtney et al., 2005; Courtney et al., 2007; Dworsky & Courtney, 2010) was conducted by social workers and provided some of the most comprehensive information available about the experiences, psychosocial outcomes, and health and mental health challenges facing older foster youth. Fourth, social workers are well equipped for cross-disciplinary collaboration, as in the present study, perceiving the broad scope of risk and protective factors affecting vulnerable groups of teens during and after their pregnancies. Social workers can work within the microecological level of the individual, and participate in the development of informed clinical and preventive interventions and policy setting. In sum, the findings of this study will have relevance for social work science and practice, as well as for other helping professionals involved in the care of childbearing teens.

Chapter 2: Review of the Literature

Awareness that conditions during the critical developmental phase of fetal life[5] can influence distal health and mental health outcomes is not new (Ellison, 2010; Kendall-Tackett, 2007; Thomson, 2004, 2007; A. D. Weinstein, 2016). In the past several decades, clinical and epidemiological observations of and conventional wisdom about the salience of prenatal health for developmental outcomes have been supported by a growing body of evidence from empirical work involving both animal and human studies. The study explored the intersection of cumulative disadvantage and attitudes and behaviors concerning pregnancy and pregnancy health, and what factors may contribute, from the teens' perspective, to positive attitudes and health behaviors during pregnancy.

Theoretical Framework: Cumulative Advantage/Disadvantage Theory

The aspect of this study that explores teens' past exposure to interpersonal trauma, or childhood adversity, was motivated by the outcomes of the ACE study. Although retrospective, the study explored the impact of one form of accumulating risk, or disadvantage, on a very broad variety of outcomes over the life course. Farris et al. (2007) reviewed several classifications of models for studying cumulative disadvantage, and posit that longitudinal models have the most explanatory power. These models may both track continuous variables and compare how single incident as well as chronic exposure to risks are influenced by resiliency factors and vulnerability within a group or individual over time. The total ACE score itself is considered to provide a metric for cumulative stress beginning early in life (A. Murphy, Steele, Dube, et al., 2014). Cumulative Advantage/Disadvantage theory (CAD, Dannefer, 2003; Merton, 1988;

[5] All of gestation until birth, including the prenatal and perinatal periods.

O'Rand, 2002) is a longitudinal model of interindividual divergence on a given characteristic as a function of fluctuating risk and resilience (Dannefer, 2003) and proposes mechanisms to study inequalities in specific groups by considering both cumulative adversity as well as protective factors. Although originally developed to explore the etiology of advantage in scientific fields (Merton, 1988), the theory is germane to the study of accumulating disadvantage (risk factors) and advantage (protective factors) on health and mental health status over the life course (Dannefer, 2003; Elder et al., 2003; Furumoto-Dawson et al., 2007; Hatch, 2005; Nurius et al., 2012; O'Rand, 2002; Repetti, Taylor, & Seeman, 2002; Shonkoff et al. 2009; Shonkoff et al., 2012; Wadsworth, 1997; Wickrama, Conger, 2005). O'Rand's and Hamil-Luker (2005) offered a definition pertinent to the current study. They proposed that childhood disadvantage is compounded over time by successive limitations or insults, life course transitions, and health behaviors that increase risk and foster compromised faculty to respond to ensuing adversity.

Studies have identified potential sources of adversity beginning in utero that include the genetic makeup of a pregnant women and her partner, and external teratogens (Li, Gonzalez, & Zhang, 2010; Thomson, 2004, 2007; A. D. Weinstein, 2016). Some of these factors have been investigated more extensively, for example, nutrition, tobacco, substance use, and sexually transmitted infections (STIs) during pregnancy, as well as timely prenatal care, and are of particular relevance for pregnant teens. Adverse conditions in utero may be compounded by post-birth and early childhood hardship such as child maltreatment and traumatic loss, risk behavior in adolescence and adulthood, and the stress of living in low-resource, violent communities (Larkin et al., 2012; Nurius

et al., 2012; Shonkoff et al., 2012). Although early adversity may be compounded by cumulative disadvantage, it is not deterministic. Protective factors encountered by an individual or group may minimize the impact of disadvantage over time (Gillespie et al., 2009; Gisselmann, 2006; Hatch, 2005; Masten, 2001; O'Rand, 1996, 2002; Rutter, 1979, Wadsworth, 1997). In other words, "risk," or vulnerability, and "protection" are two sides of the same coin, but it is *resilience* as a process in the event of a stressor or series of stressors that renders one *adaptively responsive* to risk.

Figure 1 presents a theoretical model of this trajectory with emphasis on the potential impact of cumulative disadvantage on parenting capacity and encompasses the possibility of both social causation and social selection. The social causation hypothesis proposes that poverty and the hardships associated with poverty foster the emergence of negative outcomes. Mental health is the outcome most studied (see Hudson, 2005; Ferguson, Horwood, & Woodward, 2001). In a social selection paradigm, genetic and temperamental factors set the stage; this hypothesis suggests that those pedisposed toward mental health conditions gravitate toward lower resource communities and/or experience the negative impact of their mental health conditions on income and employment prospects. At any point in this model, internal and external protective factors that enhance positive adaptation, or resilience, may moderate these effects (Hatch, 2005; Wickrama, Conger et al., 2005; Furumoto-Dawson et al., 2007). External factors might include increased social support, the presence of a caring adult in an otherwise abusive home, therapeutic interventions, or positive changes in financial status (Luthar et al., 2000). Internal factors include those that may constitute aspects of resilience at the individual level: agency, relatedness to others, help-seeking, reflectiveness/psychological

mindedness, self-and affect regulation, planfulness, persistence and ambition, self-esteem, and optimism (Bernard, 1995; Hauser et al., 2006; Masten et al., 1999; Ungar, 2004). It is the interaction of individual characteristics and beliefs with external supports and positive changes in status that may contribute to adaptive outcomes, although these factors are often unsystematic, contextual, and difficult to measure (Ungar, 2004, 2013).

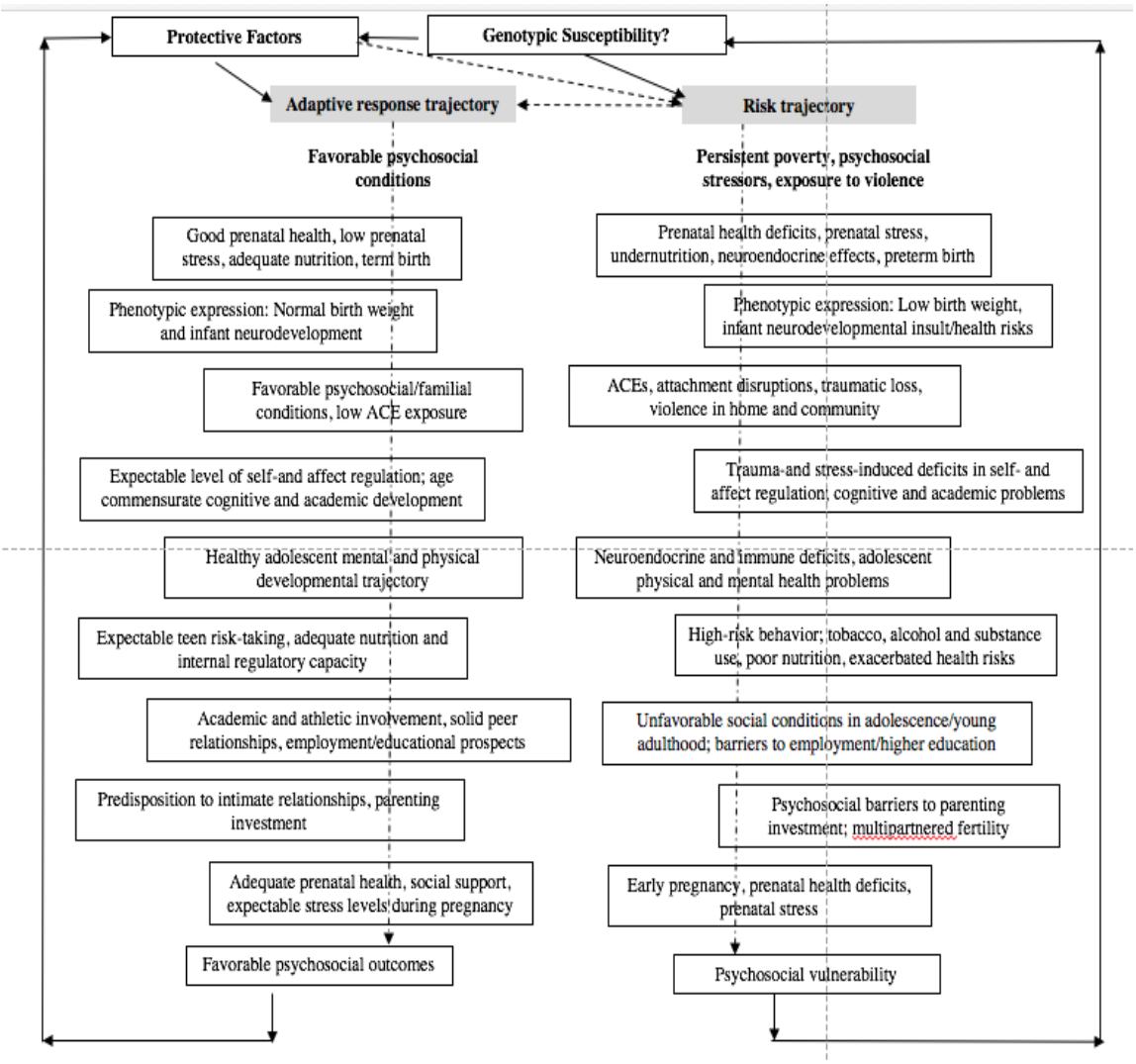

Figure 1. Prenatal health, adverse experiences, and cumulative disadvantage. Adapted from "Early Adversity and Later Health: The Intergenerational Transmission of Adversity Through Mental Disorder and Physical Illness," by K. A. Wickrama, R. D. Conger, and W. T. Abraham, 2005, *Journals of Gerontology, Series 60B,* p. 126, and "Resiliency and Vulnerability to Adverse Developmental Outcomes Associated with Poverty," by N. Garmezy, 1991, *The American Behavioral Scientist*, p. 419.

The Intersection of Resilience and Cumulative Disadvantage Theories

The formal pursuit of the study of resilience began in the 1970's with the work of Garmezy (1974), and later Masten et al. (1995). This work sought to strengthen the knowledge base surrounding adaptive outcomes in people with schizophrenia and the characteristics that may have fostered these outcomes. Research into resilience expanded over the next two decades to include not only individual characteristics but familial and wider sociodemographic influences; in other words, what were the factors, at multiple ecological levels, that co-occurred with adaptive outcomes? Risk factors also expanded to include not only aspects of the children under study, but ACEs and community-level factors such as persistent poverty and living in low-resource, high crime communities.

Arrington and Wilson (2000), Bernard (1995), Hauser et al. (2006), Kennedy (2005), and Kennedy et al. (2010) note that children who experience cumulative adversity are constantly adapting in a dynamic fashion to survive, and at times cope well. In this way, high-adversity environments *produce* resilience in the process of problem solving, minimizing danger and oppression, and developing and maintaining optimism (Drapeau et al., 2007). Masten (2001) and other prominent resilience theorists (Garmezy, 1991, 1993; Hauser, 1999; Hauser et al., 2006; Luthar et al., 2000; Masten et al., 1990; Rutter, 1987, Ungar, 2004; Winfield, 1994) note that a person cannot be considered resilient if there has not been a threat to normative development. Resilience is defined by Masten (2001) as "A class of phenomena characterized by good outcomes despite serious threats to adaptation or development" (pp. 228). Luthar and Cicchetti (2000, p. 858) similarly define resilience as "A dynamic process wherein individuals display positive adaptation

despite experiences of significant adversity or trauma." According to Bandura (1982, 1989), resilience and self-efficacy emerge through perseverance in mastering adversity.

Resilience as an outcome is more difficult to specify in sociodemographic context that it is as a construct. Challenges to identifying resilience as an outcome include, first, measurement issues, as some researchers focus on person-based approaches while others utilize variable-based design. Second, some rely on main effect, ecological conceptions of risk and protective factors as opposed to dynamic, mediated processes (Ungar, 2004; Ungar & Teram, 2000). Third, as Luthar et al. (2000), Masten et al. (1999) and Gest, Reed, and Masten (1999) argue, operationalizations of resilience itself should be more universalized, and that vulnerabilities and protective factors within and external to an individual or group need to be specified more cogently to determine what may contribute to adaptive outcomes—the characteristic itself (main effect), or the characteristic in the context of differing levels of disadvantage (interaction). Fifth, as Ungar (2004) points out, the study of risk, protective factors, and adaptive outcomes may be colored by a hegemonic discourse on what adaptive beliefs or behavior should look like, without due attention to sociodemographic context and conceptions of resilient beliefs and behavior held by disempowered groups.

Despite these challenges, there is, to some degree, uniformity in isolating individual characteristics of resilient, adaptive youth. These factors have been identified in both quantitative (Lee et al., 2010; Masten et al.,1999; Wagnild, 2009) and qualitative studies, the latter of which specifically explore resilience in high-risk teens (Drapeau, Saint-Jacques, Lépine, Bégin, & Bernard, 2007; Hauser, 1999; Hauser et al., 2006; Lee, Kwong, Cheung, Ungar, & Cheung 2010; Shepherd, Reynolds, & Moran, 2010; Ungar &

Teram, 2000) and pregnant teens (Barcelos & Gubrium, 2014; Breen & McLean, 2010; Hess et al., 2002; Kennedy, 2005; Kennedy et al., 2010; McDermott & Graham, 2005; Solivan et al., 2015). These studies attempt to define what constitutes adversity over time, and what constitutes successful adaptation. These authors and others also acknowledge that although resilient children and teens may display more positive adaptation than less resilient children, at times these outcomes come at a cost, for example, to their mental health (Luthar, 1991; Luthar, Doernberger, & Zigler, 1993), and shifting exigencies of their circumstances.

Individual Characteristics of Resilience: Resilience Beliefs

Resilient adolescents have been found to possess intrinsic qualities that allow them, in turn, to utilize *external* sources of protection and support that occur at salient developmental time points and in times of relatively greater adversity (Hauser et al., 2006; Hauser, 1999; Drapeau et al., 2007; Lee et al., 2010; Kennedy, 2006; Masten et al., 1999). Bernard (1995) notes that longitudinal studies following children growing up in families with abusive, mentally ill, substance using, or criminally-involved parents, or in entrenched poverty or war-torn countries, document that 50 to 60% of these children exhibit manifestations of resilience and "overcome the odds." These qualities may be partially determined by biological factors that influence temperament and the ability to regulate strong emotions, which in turn can facilitate stress-coping (Gillespie et al., 2009). They may also emerge from internal processes, or *beliefs*, developing over time as an interactive process with external sources of support, which in turn can predispose youth to alter *behavior* in favorable ways (Black & Ford-Gilboe, 2004; Drapeau et al., 2007; Lee et al., 2010; Luthar et al., 2000; Ungar, 2004, 2013; Ungar and Teram, 2000).

Table 2.1 outlines how luminaries in this field have typified individual characteristics of resilience. Although there is some variability here, and the salience of person-environment dynamics also varies as a function of each author's theoretical foundations, these are presented as a scaffolding for capturing the aspects of resilience that emerged in this study.

Table 2.1

Resilience Beliefs and Definitions

Author	Resilience Belief	Definition
Bernard (1995)[a]	Autonomy/Agency	• Possessing a sense of one's own identity, perceiving ways to influence one's own environment and believing in one's own self-efficacy, acting as an independent agent, having a sense of task mastery, having a sense of internal locus of control.
	Sense of purpose/Optimism	• Possessing a belief in a positive future including the ability to attain goals, having educational aspirations, motivation to achieve, persistence, general hopefulness, optimism, and spiritual connectedness.
	Relatedness/Social competence	• Possessing effective communication skills, being responsive, eliciting positive responses from others, being flexible in social situations, having empathy, and a having sense of humor.
	Problem-Solving/ planfulness	• Possessing the ability to plan for one's future and to be resourceful, to think critically and creatively about problem-solving.
Hauser & Allen (2007)[b]	Representations of self	• Self-reflection, agency, efficacy, and esteem, having aspirations, hopefulness, and visioning and planning for one's future.
	Representations of relationships	• Discursive strategies around relationships reflect a sense of interconnectedness; the act of seeking, recruiting, and staying connected with others.
Bandura (2001)[c]	Personal efficacy (the foundation of agency)	• Belief in one's own personal agency, the ability to set and obtain goals and a desired future state.
	Self-regulation	• Ability to regulate one's behavior and affect to obtain a desired set of goals.
	Belief in collective efficacy	• Belief in the collective—working with others to obtain desired ends; finding and collaborating with others to act on one's own behalf.
	Reflectiveness	• "Metacognitive processing" or the ability to reflect on one's own thoughts, actions, motivations.

Author	Resilience Belief	Definition
Ungar et al. (2008)[d]	Considers individual's interactions with their social ecology; definitions can be flexible (culturally and contextually referent)	• Individuals' capacity to navigate available resources to sustain well being. • Capacity of a social ecology to provide necessary resources. • Capacity of individuals, families, and communities to navigate and negotiate collectively in culturally relevant ways toward well-being, in a manner valued by young people in particular.
Wright, Masten, & Narayan (2013)[e]	Social, adaptable	• Social and adaptable temperament from infancy.
	Cognitive, problem solving	• Good cognitive abilities, problem solving skills, and executive functions.
	Peer relationships	• Ability to form and maintain positive peer relationships.
	Regulation	• Effective emotional and behavioral regulation strategies.
	Self-perception	• Confidence, self-esteem and self-efficacy.
	Hopefulness	• Optimism and positive outlook on life.
	Sense of meaning	• Faith and a sense of meaning in life.
	Valued personal characteristics	• Sense of humor, liked by/connectedness with others.

Note: Adapted from [a]"Fostering Resilience in Children (Report No. EDO-PS-95-9)." By B. Bernard, 2005, *Washington, DC: Department of Education. (ERIC Document Reproduction Service No. 386327)*. [b]"Overcoming Adversity in Aolescence: Narratives of Resilience." By S. T. Hauser & J. P. Allen, 2007, *Psychoanalytic Inquiry*, *26*(4), 549-576. http://dx.doi.org/10.1080/07351690701310623. [c]"Social Cognitive Theory: An Agentic Perspective." By A. Bandura, 2001, *Annual Review of Psychology*, 52, 1-26, [d]"The Study of Youth Resilience Across Cultures: Lessons From a Pilot Study of Measurement Development. By M. Ungar et al., 2008, *Research in Human Development*, *5*(3), 166-180. http://dx.doi.org/10.1080/15427600802274019, [e]Resilience Processes in Development: Four Waves of Research on Positive Adaptation in the Context of Adversity. By M. O. Wright, A. S. Masten, & A. J. Narayan, 2013, In S. Goldstein & R. B. Brooks (Eds.), *Handbook of Resilience in Children* (2nd ed., pp. 15-38). New York: Springer.

In addition, resilient parenting in higher risk mothers has been associated with psychological mind-mindedness (Arnott & Meins, 2007; Meins, Fernyhough, Fradley & Tuckey, 2001) and reflectiveness (Fonagy, Gergely, Jurist, & Target, 2002; Slade, 2005, 2007), concepts extending from the psychoanalytic study of parent-infant relationships (Fonagy et al., 2002). These internal qualities can be protective elements with respect to the post birth relationship in women exposed to adversity, including parenting teens (Breen & McLean, 2010; Kenney, 2005; Kennedy et al., 2010; S. J. Kulkarni et al., 2010; Pryce & Samuels, 2010; Solivan et al., 2015).

This lens can be applied to furthering an understanding of resilient beliefs and behaviors in pregnant teens. Their interactions with social factors and institutional arrangements (e.g., family structure and functioning, schools, community support and resources, health and mental health providers) may either exacerbate or protect against early life course inequalities (Dannefer, 2003; Furstenberg, 2007; Herztman, 1999; Kirchengast & Hartmann, 2003; Larkin et al., 2012; Ungar, 2013). It is individual variations in resilience that allow for successful utilization of these external resources (Hauser, 1999; Hauser et al, 2006; Rutter, 1987). There is also individual variation in what may constitute desired or positive outcomes. While teen mothers may regard conventionally valued behaviors and outcomes (e.g., completing school, avoiding personal risk, obtaining residential stability) in a positive light, a societally unacceptable *turning point*, youthful pregnancy, may be viewed as an impetus toward the attainment of these outcomes (Arai, 2009; Drapeau et al., 2007; Rains et al., 1998; Rolfe, 2008; Barcelos & Gubrium, 2014; Shanok & Miller, 2007; Ungar, 2004). The term “turning point” is used to underscore an event that produced a substantive change in one’s life

course generally as described by Elder et al. (2003) and Rutter (1987), in high-risk teen girls (Shepherd et al., 2010), in female adult survivors of sexual abuse (Bogar & Hulse-Killacky, 2006) and in the case of pregnant teens, Rolfe (2008), and SmithBattle (2009).

With respect to the current exploration of attitudes toward and behavior during pregnancy, it may be teens' resilient *beliefs* in the absence of yet observable outcomes that predisposes them to utilize protective factors at the individual, family, and community level (Luthar & Cicchetti, 2000) and the advent of pregnancy to promote a healthier, more positive trajectory and treat their unborn children through this lens, thus improving their health from the outset and forming an early bond. Black and Ford-Gilboe (2004), in their quantitative study with 41 teen mothers, provided some preliminary evidence that supports this hypothesis. Their exploration of the relationship between resilience beliefs, assessed through the Resilience Scale (Wagnild & Young, 1993), and active pursuit of health-related goals and behaviors yielded modest positive correlations. Multiple regression revealed that resilience was a significant predictor of engaging in health-promoting behaviors.

Defining Prenatal Health Behavior

The term "parental effects" has been used in studies that have investigated the baseline health, attitudes and behavior of pregnant women (Wells, 2010), around which a grounded theory had been pursued. Prenatal health behavior includes behaviors a pregnant woman may pursue that are protective or hazardous, and are defined as "Activities a pregnant woman engages in that affect gestational outcomes, including her own health as well as the heath of the fetus" (Lindgren, 2005, p. 465). Theoretical perspectives that consider the developmental costs of cumulative biopsychosocial stress

on mental and physical health such as the DoHAD and CAD paradigms may serve as umbrella concepts for the importance of prenatal health within the context of a pregnant woman's social environment. A pregnant woman's prenatal health comprises three basic categories, assessed by most operationalized measures of pregnancy health. These categories include (a) maternal physical health, such as proper and balanced nutrition, appropriate weight gain, adequate rest, and exercise; (b) prenatal care, which is formal medical oversight consisting of regular medical visits with physician, nurses, or midwives, obtaining pregnancy-related information, and following medical advice; and (c) avoiding risk behavior, such as smoking, alcohol consumption, illicit substance abuse, physical harm, toxin exposure, unprotected sex, and contracting STIs and the human immunodeficiency virus (HIV).

The purpose of enhancing prenatal health is to prevent adverse gestational outcomes, particularly low birth weight and preterm birth, defined by the World Health Organization (2012) as weight at birth of less than 2,500 grams (5.5 pounds), or small for gestational age babies, who often have a substandard developmental trajectory. The Centers for Disease Control and Prevention (CDC, 2011), through its Pregnancy Risk Monitoring System (Beck et al., 2002; Suellentrop, Morrow, Williams, & D'Angelo, 2006), Harrison and Sidebottom (2008), Mason et al. (2002), Nunes et al. (2010), Seng et al. (2010), and Vonderheid, Norr and Handler (2007) have made a cogent case for more comprehensive and systematic screening for threats to pregnancy health, including inadequate medical care, undernutrition, and exposure to ingested teratogens and external toxins, particularly among women with negligible access to health-promoting resources.

Teens' perspective on the prenatal phase. There is a profound difference between the positive lens through which many teens perceive their pregnancies and their babies, and the widespread pessimistic view of teens' potential as mothers. Not only do pregnant teens perceive their pregnancies positively, but, as evinced through qualitative work, they see this turning point in a notably more positive way than older, low-income, inner city women. As Aparicio et al. (2015), Breen and McLean (2010), Dornig et al., (2009), Neiterman (2012), and Solivan et al. (2015) note, teens often maintain a positive and at times transcendent view of their pregnancies from within a sociopolitical context that has vilified them and their pregnancies as a major social health problem. Their discourse on the value of their pregnancies, both for themselves as they traverse a developmental phase which is often riddled with violence and loss, and for their babies, as a means to "redo" their own early relationships, may be unique to their age. It also may be representative of what Barcelos and Gubrium (2014), Ungar (2004) and Ungar and Teram (2000) term "alternate narratives," where members of a marginalized group determine, through utilization of their own internal resources in interactions with their specific environments and conditions, what behaviors are acceptable to them and might provide them with access to more favorable lives. Although few qualitative studies specifically explore the health behaviors of pregnant teens, Solivan et al. (2015), utilizing a resilience framework, found that teens who possessed more internal indicators of resilience perceived pregnancy as a stabilizing event, and those who had more family support were more likely to change unhealthy behavior during pregnancy.

Yet even with many teens striving to behave in a positive and health-affirming manner during pregnancy, disparities between teens and adult women still endure. This

may be partially due to how the outcomes of quantitative explorations are disseminated and utilized, such that there are not enough comparative studies between teens and older pregnant women on these indicators (Barcelos & Gubrium, 2014; Duncan, 2007), and not enough effort expended in unpacking the risks of teenage parenthood from poverty and cumulative adversity (Bonnell, 2004; D. M. Kelly, 1996; Lawler & Shaw, 2002). Findings from some but not all outcomes studies have persistently revealed concerning patterns. Whether the suboptimal outcomes of teen pregnancies are due to young age, risk behavior, the sociodemographic stressors that often serve as a backdrop for teen pregnancy, or an interaction between these variables or some other unknown common factor continues to be debated. There has been considerable cross-disciplinary focus on identifying the *factors* that contribute to disparate outcomes between teens and adult women who give birth (Boden et al., 2008; S. J. Kulkarni et al., 2010; Milan, Ickovics, et al., 2004; NCPTUP, 2010a) and why this is so. Pregnant and parenting teens are more likely to have cumulatively experienced these factors than nonparenting teen girls (Barn & Montovani, 2007; Coley & Chase-Lansdale, 1998; Garmezy, 1993; Hillis et al., 2004; Hoffman, 2008b; Kennedy, 2006; Kennedy et al., 2010; S. J. Kulkarni et al., 2010; Milan, Ickovics, et al., 2004; SCAA, 2008). Many are present before pregnancy; even if young maternal age and developmental status does confer some degree of vulnerability, these psychosocial factors confer their own quotient of risk and as such, it is myopic to focus on the biology of young age as a single-factor, a priori explanation.

Biopsychosocial Risks to Teens' Prenatal Health

Several levels of psychosocial and biological vulnerability have been associated with teen pregnancy, including those at broader ecological levels. This has invoked

discourses on the association between teen pregnancy and poverty, race, and challenges to dominant views of traditional family structure. Vulnerability associated with individual risk behaviors generally linked to teens were inquired about in our pilot survey and discussed by teens during the interview process. Risk factors including late prenatal care, substance and alcohol use, smoking, and poor diet are discussed in the following section. Following Abrams and Curran (2011), Alhusen, Gross, Hayat, Rose, and Sharps (2012), T. Bloom, Glass, Curry, Hernandez, and Houck (2013), Dailey, Humphreys, Rankin, and Lee (2011), who conducted qualitative studies of risk behaviors and sources of adversity with low-income pregnant adult women, the justification for the current inquiry was derived from findings of quantitative studies of risk in the absence of qualitative work.

Prenatal Medical Care

Pregnant teens are known to be inconsistent when it comes to protecting their prenatal health through timely, formal medical oversight. Teens characteristically obtain prenatal care later in pregnancy than adult women (Bragg, 1997; Debiec, Paul, Mitchell, & Hitti, 2010; Hueston, Geesey, & Diaz, 2008; Ketterlinus et al., 1990; Max & Paluzzi, 2005; SCAA, 2008; Tilghman & Lovette, 2008). Late initiation is defined as third-trimester care seeking, as opposed to early initiation, first-trimester care seeking. Although teens generally desire prenatal care, some data show that 40% of teen mothers do not obtain care in the first trimester, and 10% do not obtain it until the third trimester or do not seek it at all (Ketterlinus et al., 1990; NCPTUP, 2010c; SCAA, 2008). There are myriad reasons for this disparity, some of which challenge notions of personal culpability; both logistical and perceptual barriers may exist. These include unawareness of pregnancy due to irregularities in the ovarian cycle (Roth et al., 1998), the experience

of early sexual abuse, which may predispose women to find routine prenatal care triggering and invasive (Bohn & Holz, 1996; Seng et al., 2011; Shieh & Kravitz, 2006), lack of social capital and access to formal care (Brubaker, 2007; Mollborn, 2007; Tilghman & Lovette, 2008), and perceptions of medical staff and other helping professionals.

Daniels, Noe, and Mayberry (2006) conducted a qualitative study in a series of focus groups with 31 inner city pregnant women aged 16-36, 88% of whom lived below the poverty line, to determine factors that may have been barriers to care. Women in this study who were late initiators of prenatal care, regardless of age, perceived clinicians to be "insensitive," or not culturally competent. Cox et al. (2005) conducted qualitative explorations in focus group format with 16 inner city pregnant and parenting teens, who sought a gamut of information on prenatal care and education. Teens wanted to obtain more information and assistance with nutrition, STIs, ways to include fathers, the birth process, and housing, but noted that private obstetricians were lacking in sensitivity toward them and that they would rather receive this care in a clinic setting designed for their specific needs. Teens who obtain timely prenatal care do benefit from it. There is evidence for associations between initial prenatal care-seeking and reductions in smoking, alcohol, and substance use as well as improved nutrition. In this scenario, formal prenatal care may be protective but its effects on birth outcomes may be mediated by improved prenatal health behaviors (Covington, Peoples-Shep, Buesher, Bennett, & Paul, 1998; Fiscella, 1995; Roth et al., 1998).

High-Risk Behavior

Teens in general are more likely than adults to engage in unsafe behaviors (Cavazos-Rehg et al., 2012; Crosby, DiClemente, Wingood, Rose, & Lang, 2003; Eaton et al., 2010) that may continue during pregnancy and have direct relevance for fetal health and developmental outcomes (Covington et al., 2001; S. C. Jones, Telenta, Shorten, & Johnson, 2010; Kaiser & Hays, 2005; Kingston et al., 2012; Koniak-Griffin & Turner-Pluta, 2001; S. L. Martin, Clark, Lynch, Kupper, & Cilenti, 1999; Quinlivan & Evans, 2005; Renker, 1999; Spears, Stein, & Koniak-Griffin, 2010). These risky behaviors are often associated with each other statistically as they may possess underlying common causes including gender, family influences, age-associated impulsivity, or a latent underlying vulnerability (A. B. Kelly et al., 2011; Lynskey, Fergusson, & Horwood, 1998).

Pregnant teens are more likely to contract STIs than are adult women and have higher rates generally (Hidalgo et al., 2005; Niccolai et al., 2003; Oh et al., 1993; Quinlivan & Evans, 2004; Santelli et al., 1999). Teen sexual behavior and pregnancy have expectable psychosocial risk factors in common (Bunnell et al., 1999; Niccolai et al., 2003; Saewyc, Magee, & Pettingell, 2004; Walcott, Meyers, & Landau, 2008). With respect to substance use, outcomes of the 2009 Youth Risk Behavior Surveillance survey (YRBS, Eaton et al., 2010), for 12th graders indicated that 51.7% drank, 33.1% had smoked cigarettes, and 29.9% had smoked marijuana in the month prior to the survey. Data from the National Institutes of Health, National Institute on Drug Abuse (2012), revealed that in 2012, 28.1% of 12th graders reported getting drunk in the past month, 41.5% stated they drank alcohol, and 17.1% were smokers. Items from the YRBS

are similar to those included in health behavior assessments administered during pregnancy. Tobacco, alcohol, and drug use during pregnancy are discussed here because teens have a greater likelihood of tobacco and substance use than do older pregnant women generally, and of continued use during pregnancy (Cornelius, 1996; Kingston et al., 2012; Quinlivan & Evans, 2005). Cornelius (1996), Quinlivan and Evans (2005), and Spears et al., (2010) noted that pregnant teens are likely to use substances as a mechanism to cope with stress and regulate emotional states. These authors reported that although a fair number of teens reduce illicit drug use upon learning they are pregnant (90% and 40%, respectively, in their samples), many continue to use tobacco and alcohol, and about half resume within six months of giving birth. Pre-pregnancy use, partners who use, and a history of child physical or sexual abuse were all significant predictors of continued and resumption of use (Spears et al., 2010).

Substance Use During Pregnancy Among Teens

Tobacco. Smoking, particularly in an interaction with poor nutrition during pregnancy (Rondó, Souza, Moraes, & Nogueira, 2004) exerts some of the most toxic effects on the fetus and is associated with more distal neurodevelopmental and psychiatric outcomes. Nicotine, in conjunction with exposure to other substances toxic at the cellular level may have the greatest potential to diminish oxygen and glucose delivery to the fetal brain and vital organs (Bruin, Gerstein, & Holloway, 2010; Ernst, Moolchan, & Robinson, 2001; Li et al., 2012; Slotkin, 1998; A. Walker, Rosenberg, & Balaban-Gil, 1999; Windham, Hopkins, Fenster, & Swan, 2000). In this way, smoking may contribute independently to or mediate the association between gestational outcomes and deficits in motor, memory, and cognitive systems (Huizink & Mulder, 2006; Liao, Chen, Lee, Lu, &

Chen, 2012; Nigg & Breslau, 2007; Rees & Inder, 2005). Smoking increases the risk for preterm birth, but its greatest impact is on fetal growth (Chiolero, Bovet, & Paccaud, 2005; Delpisheh, Attia, Drammond, & Brabin, 2005; Nigg & Breslau, 2007; A. Walker et al., 1999) in a dose-dependent manner (Delpisheh et al., 2005; Windham et al., 2000). These deficits may be exacerbated due to concomitant reductions in maternal dietary intake and lowered weight (Kramer, Séguin, Lydon, & Goulet, 2000).

Smoking seems to be the greatest challenge to be overcome during teen pregnancy. Pregnant teens age 15-19 years have the highest smoking rate of all age groups of pregnant women at 16.7%, particularly those in the 18- to 19-year age range, at 18.2% (Ventura, Hamilton, Mathews, & Chandra, 2003). Teens who live below the poverty level are more likely to smoke during pregnancy than are those who live at or above this marker (Beck et al., 2002; Webbink, Martin, & Visscher, 2008). In a study that compared the substance use rates of 267 pregnant adult women and 124 pregnant teens age range 13-18 years, Cornelius et al. (1994) found that although tobacco use decreased among adult women once they became pregnant, it increased from 56% to 71% in pregnant teens in the first two trimesters although decreased for both adults and teens during the third. Cornelius, Goldschmidt, Day, and Larkby (2002) investigated the long-term impact of prenatal tobacco use among 345 teens on their children six years after delivery and found that tobacco use remained at levels similar to pre-pregnancy use throughout gestation. Kaiser and Hays (2006) found, in their study of the health risk behaviors of 145 pregnant teens, that 37 (27%) of the 75 teens who smoked before and early in pregnancy continued to do so throughout, a much higher number than those who continued to drink alcohol or use illicit drugs past the first trimester. Quinlivan and Evans

(2005) investigated the interaction effects of several substances on use and found, in a cohort of 180 pregnant teens, of the 62 who were marijuana users during pregnancy, 74% continued to smoke cigarettes and 39% continued to drink.

Alcohol. There is a dearth of knowledge about the patterns of alcohol consumption of pregnant teens, and patterns of drinking differ between teens and older pregnant women. Cornelius et al. (1994) and Callinan and Room (2012) found that women older than 35 were less likely than teens to stop drinking once they learned they were pregnant. Cornelius et al. (1994) found, in one of the few longitudinal studies of alcohol consumption in pregnant teens in the sample described above, that 82% drank in the year prior to pregnancy, 54% continued to drink during the first trimester, 19% during the second, and 14% during the third. With respect to the timing of maternal health behaviors and risk to the fetus, first-trimester exposure is most significant for specific aspects of neuronal development since neuronal cell groups throughout the brain are formed and extensive synaptogenesis takes place. Cornelius et al. (1994) found that although older pregnant women (n = 267) generally drank more heavily than did teens (n = 124), the rate of sporadic bingeing during the first trimester was higher for teenagers than it was for adults and did not decrease until after the first trimester. This pattern of alcohol consumption is of concern because binge drinking, particularly during early pregnancy may have neurodevelopmental impact on infants (Day et al., 2002; Day & Richardson, 2004; Henderson, Kesmodel, & Gray, 2007; Richardson, Ryan, Willford, Day, & Goldschmidt, 2002; Streissguth, Bookstein, Sampson, & Barr, 1995). This finding has salience for teens because they are likely to binge before they know they are pregnant.

Illicit drugs. Pregnant teens use marijuana more than other illicit substances although there is also a dearth of data on rates of drug use in pregnant teens. Cornelius et al. (2002) conducted one of the few studies that assessed prevalence of marijuana use. These authors found, of 345 pregnant teens with (average age 16), that 95, or 27.7%, of them used marijuana prior to pregnancy and that 55, or 15.9%, used marijuana during the first trimester. The study conducted by Cornelius et al. (1994) which investigated comparative alcohol use during pregnancy among teens and adult women, did so in the context of other substance use. They found that although adult women used marijuana more frequently, there were more significant interaction effects between alcohol and marijuana use in teens. For example, for teens who drank during pregnancy, marijuana use was 17 times greater than for those who did not, but only seven times greater for adults. Quinlivan and Evans (2002) found, in a cohort of 456 teens, that of those who continued to smoke marijuana throughout pregnancy (20.3%), 33% also used multiple substances and that alcohol and tobacco use was also more likely amongst this group. While outcomes of these substances for fetal health are equivocal in the presence of covariates, these authors acknowledge the potentially additive effect of these variables and advocate for better screening and enhanced prenatal care and education.

There are methodological concerns that must be taken into account when considering the outcomes of studies that assess the impact of substance and tobacco use during pregnancy, including several potential threats to validity. Studies are often conducted on clinical samples using retrospective self-reports, the accuracy of which cannot be confirmed (Huizink & Mulder, 2006). On the other hand, retrospective reports may provide more accurate information due to the reduced likelihood of social

desirability bias once pregnancy has ended (Jacobson et al. 1991). There is selection bias inherent in working with clinical samples due to potential overrepresentation of a problem, resulting in the possibility of threats to external validity. In addition, studies that assess the impact of substance use during pregnancy may or may not control for the influence of other factors that tend to occur concomitantly or have underlying common causes (Cavazos-Rehg et al., 2012; Schmidt & Georgieff, 2006). As Henderson et al. (2007) found in their meta-analysis of the developmental impact of binge drinking, publication bias and participant underreporting are also problematic. While these sources of bias are of concern, tobacco, alcohol, and substance use occurs disproportionately in women of high social risk in general and teens specifically, and the risks to prenatal health and infant development bear discussion.

With respect to substance use, most qualitative explorations of teens' beliefs about their health and behavior, and the importance of their unborn infants during their pregnancies produce a striking contrast to quantitative work. For example, Breen and McLean (2010), in their phenomenological study on the impact of pregnancy on teens' life course found that teens in their small sample had been engaged in shoplifting, selling drugs and getting high, but experienced "personal transformations" after discovering that they were pregnant, stating that they ceased these behaviors. In other qualitative studies where teens stated they improved their health behaviors with news of their pregnancy, they reported abstaining from hard drugs (Barn & Montovani, 2007; Connolly et al., 2012; Solivan et al., 2015; Shanok & Miller, 2007) and from drinking alcohol or using tobacco (Barn & Montovani, 2007; Lesser, Anderson, & Koniak-Griffin, 1998; Montgomery, 2002; Rentschler, 2003; Shanok & Miller, 2007; Solivan et al., 2015).

Qualitative studies have not been provided a standing in the debate about the contribution of teens' health risks to teen pregnancy outcomes. Teens' *intention* is to cease risk behavior is often borne out in behavioral changes not captured in quantitative work (Duncan, 2007; Graham & McDermott, 2005).

Effects of Prenatal Dietary Insufficiency and Smoking-Related Hypoxemia

Perhaps the greatest threat to the health of mother and fetus is the interaction effect of nutritional insufficiency and smoking. Nutritional restriction during pregnancy due to lack of knowledge or access to healthy food, often a consequence of living in poverty, can have serious ramifications for the health of the mother, the placenta, and fetus (Burdge & Lillycrop, 2010; Fowles, Hendricks, & Walker, 2005; Harding, 2001; C. R. Jones & Devoe, 2005; Moore, Davies, Willson, Worsley, & Robinson, 2004; Wise et al., 2015; Widen & Siega-Riz, 2010). Maternal malnutrition can occur from overnutrition (high-fat, high-sugar, high-carbohydrate diets) or undernutrition (low consumption of vitamins, protein, and/or micronutrients). It can not only compromise fetal development but also predisposes a pregnant woman to preeclampsia, i.e., pregnancy-induced hypertension (Scholl, Leskiw, Chen, Sims, & Stein, 2005). Undernutrition is especially of concern during early pregnancy when rapid development takes place, because placental health to support this rate of growth is predicated on the balance and availability of nutrients (Burdge & Lillycrop, 2010; Fowles et al., 2011; C. R. Jones & Devoe, 2005; Le Clair et al., 2009).

Undernutrition may occur before a woman is aware of the pregnancy, which has relevance for pregnant teens who are more often unaware than are adult women until later in pregnancy (Roth et al., 1998). Preclinical studies (see Li et al., 2012; Wallace et al.,

2006) have shown that common substances, most notably tobacco but alcohol and illicit drugs as well, can have an adverse impact on fetal and placental nutrition. The effects of cannabis though, the most commonly used illicit substance by teens, are equivocal (Fergusson, Horwood, Northstone, & ALSPAC Study Team, 2002). These substances all traverse the placenta easily and are more concentrated after they have passed through the placenta. Through the potentiation of *hypoxemia*, or reduced blood-born oxygen, these substances cause significant restriction of nutrient flow to the placenta and fetus (Bruin et al., 2010; Delpisheh, et al., 2005; Li et al., 2012; A. Walker et al., 1999), and have received widespread attention as teratogens. As a corollary, when fetal undernutrition is followed postnatally by overnutrition, particularly diets high in fat, sugar, and calories, all mammals compensate by rapid increases in growth. These compensatory mechanisms have costs: truncated longevity resulting from resource diversion to physical growth rather than reparatory capacity, the emergence of metabolic syndrome (Ellison, 2010; Le Clair et al., 2009, Li et al., 2012; Robinson, Moore, & Owens, 2000; Roy-Matton, Moutquin, Brown, Carrier; & Bell, 2011), and predisposition to certain cancers (Burdge & Lillycrop, 2010).

Teens' Diet and Nutrition

Teens often express an interest in making healthy food choices while pregnant (Burchett & Seeley, 2003; Reyes, Klotz, & Herring, 2013; Wise, 2015; Wise & Arcamone, 2011). Quantitative (e.g., Papas et al., 2009) and qualitative explorations on pregnant teens' food choices and eating habits (Reyes et al., 2013; Wise, 2015; Wise and Amarcone; 2011) found that while possessing a general understanding of healthy food choices, teens were often unwilling to give up foods high in fat and sugar and often made

choices based on appearance, taste, cravings, and cost. Qualitative work conducted by Cox et al. (2005) revealed that teens in their study were very interested in obtaining more information about proper nutrition, and felt that food choices available through the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) were insufficient for their dietary needs during pregnancy.

Although teens have a desire to eat well during pregnancy, they are generally unprepared for the nutritional requirements of pregnancy and often opt in favor of less healthy choices. Owing to teens' generally inadequate dietary intake, unwillingness to give up certain foods, lack of education regarding diet, and sociodemographic factors that preclude access to appropriate nutrition, pregnant teens may inadvertently provide inadequate nutritional support for their unborn infants (Burchett & Seeley, 2003; Flynn et al., 2008; Ketterlinus et al., 1990; Koniak-Griffin & Turner-Pluta, 2001; Max & Paluzzi, 2005; Papas, Hurley, Quigg, Oberlander, & Black, 2009; Reyes et al., 2013; Rondó et al., 2004; Wise, 2015), increasing their vulnerability to undernutrition and increased risk within the DOHaD paradigm. Fortunately, as Stang, Story, and Feldman (2005) note, nutrition, while being one of the most important building blocks of fetal development, is also one of the most amendable with proper education and support.

Fetal nutrition can also be affected by physiologic factors associated with early pregnancy, as younger pregnant teens (i.e., ages 15 or less) are also experiencing the maturational growth demands of adolescence. The developing fetus must utilize a considerable proportion of available nutrients, which can foster general deterioration in a teen's health over the course of gestation through competition for nutrients between mother and fetus, if they are not taking in adequate nutrition (Burchett & Seeley, 2003;

Elfenbein & Felice, 2011; Stang et al., 2005; Wise, 2015). Among the youngest adolescents, this challenge to fetal weight may occur even with appropriate weight gain (Burchett & Seeley, 2003; Elfenbein & Felice, 2011; Rondó et al., 2004; Thame, Trotman, Osmond, Fletcher, & Antoine, 2007).

For pregnant women living in low-resource communities, as are those served by the NFP, nutritional choices are influenced by both inability to access food and by limited financial resources (Fowles et al., 2005; Fowles et al., 2011; Reyes et al., 2013). As Burchett and Seeley (2003) note, the positive outcomes associated with sufficient knowledge and information can be precluded by the inability to purchase the type of food that will supply adequate nutrition during pregnancy. For foster care teens, this problem is exacerbated by poverty: about 26% of older teens in foster care reported a high degree of food insecurity (Courtney et al., 2005).

Monteith and Ford-Gilboe (2002) conducted a quantitative study with 67 currently socially advantaged mothers of preschool children to assess the relationship between mothers' resilience and pursuit of health-promoting lifestyle practices. They found that holding other variables such as employment status and professional supports constant, over 30% of the variance in mothers' health-promoting behavior was explained by their resilience, measured with the Resilience Scale (Wagnild & Young, 1993) which assesses for indicators of broadly-referenced internal and external harbingers of resilience against a backdrop of loss. This group conducted an additional quantitative study (Black & Ford-Gilboe, 2004) to explore factors potentially facilitating health-promoting lifestyles and behaviors among pregnant teens. The study provided some evidence that the most resilient teens in their study, at least 50% of whom had experienced past abuse,

engaged in more health promoting behaviors than non-resilient teens (Black & Ford-Gilboe, 2004). The authors found that teens who scored higher on the Resilience Scale also scored higher on two measures of health-promoting practices during pregnancy. Interestingly and of theoretical importance for the current study, Black and Ford-Gilboe (2004) also found that resilience overall was considerably higher in teens than in adult middle class, married women in the prior study (Ford-Gilboe, 2002), and that the strength of the association between resilience and health-promoting behavior was higher in teens. These findings suggest that resilience may be a more potent internal protective factor for teens striving to achieve their health goals during pregnancy.

Mental Health

When compared to non-parenting teens or women who delay pregnancy and childbearing, pregnant and parenting teens experience more mental health problems, either as an antecedent or outcome (Chalem et al., 2012; Kessler et al., 1997; Quinlivan et al., 1999). The mental health and substance use rates and patterns of high-risk, inner-city teen girls and parenting teens have been the subject of considerable quantitative study. Adolescent girls in general are at slightly higher risk for developing depression than boys (Kovacs, Obrosky, & Sherrill, 2003; Wisdom, Clarke, & Green, 2006) and they are also more likely to develop externalizing behavior problems over time, particularly if depressive symptoms set in after age ten (Kovacs et al., 2003). Depression as a preexisting condition or a corollary of teen pregnancy and parenting has been researched more extensively than other mental health problems, likely since it is common among women of childbearing age (Kessler, 2003; Noble, 2005). With *pregnant* teens these factors are understudied and under-detected in general, and in the course of obstetric

health treatment in particular (Chalem et al., 2012; De Jonge, 2001; Quinlivan et al., 1999), where this information would be particularly and important. Mental health problems can also have an impact on prenatal health behavior directly, or indirectly through comorbid substance use and compromised self-care.

There are very few qualitative studies that specifically investigate mental health in higher-risk women, including teens, prior to or during pregnancy although pregnant teens do disclose mental health challenges in some qualitative studies (see Kennedy et al., 2010). Alhusen et al. (2012) in a mixed methods investigation of the psychosocial aspects of depression in inner-city adult women found that about half of their sample was experiencing significant depressive symptoms. During the qualitative aspect of the study, women indicated that social support was the most significant ameliorating factor. Quantitative studies have explored depression in pregnant and parenting teens as a higher risk group and found high rates, ranging from 45-61%% (Barnet, Joffe, Duggan, Wilson, & Repke, 1996; Barnet, Liu, & DeVoe, 2008; Chalem et al., 2012; Clare & Yeh, 2012; Figueiredo, Bifulco, Pacheco, Costa, & Magarinho, 2006; Gavin, Lindhorst, & Lohr, 2011; Mayers Hager-Budny, & Buckner, 2008; Milan et al., 2007; Renker, 1999; Quinlivan, Tan, Steele, & Black, 2004) and PTSD, assessed less frequently (H. N. Bailey et al., 2007; Kennedy, 2006). Barnet et al. (1996) assessed depression levels in an African American, inner-city sample of pregnant teens (n = 125) aged 12-18 years and found that 42% of teens experienced depression in the third trimester and 36% at two months postpartum. Figueiredo et al. (2006) prospectively compared rates of depression among pregnant Portuguese teens and adult mothers (n = 54) aged 14–40 during the third

trimester. Teens had higher rates of depression than did adult mothers (25.9% versus 11.1%, $p < .002$).

Depression and other mental health conditions, including PTSD can have harmful effects on prenatal health in adult women through both behavior and altered physiology associated with an elevated stress response system (Morland et al., 2007; Rosen et al., 2007; Seng et al., 2011), and on post-birth mother-infant interactions (Banyard, Williams, & Siegal, 2003; L. R. Cohen, Hein, & Batchelder, 2008). Identifying the factors that potentiate and protect against depression has been the subject of considerable study. These studies do not purport that teen pregnancy "causes" depression; rather, they explain that there is a constellation of biopsychosocial factors associated with teen childbearing that are also associated with depression (Mollborn & Morningstar, 2009).

In one of the few longitudinal studies of depression in pregnant teens, Gavin et al. (2011) followed 173 pregnant teens aged 14.2–19.0 years over a 17-year period to assess rates and sequelae of depression at five different time periods. Using a clinical measure to obtain a rating of depressive symptoms rather than a diagnosis, the authors found a baseline rate during pregnancy of 19.8%, considerably higher than that of the general population of teens, at about 12.6 for 15- to 16-year-olds and 15.4 for 17- to 18-year-olds (Merikangas et al., 2010) and that increased to 35.2% by the end of the study timetable. Teens who reported prenatal depressive symptoms were 3 times more likely to report depression at each of the ensuing time periods compared to those who did not. Gavin et al. (2011) isolated several factors associated with depression at all time periods, including poverty, number of children, and IPV, which was reported as being experienced by 67.6% of teen mothers during the first 18 months postpartum.

Of concern is that depression, PTSD, and other mental health conditions may exacerbate the challenges of teen pregnancy in the post-birth as well as prenatal relationship. With respect to parenting, Ramos-Marcuse et al. (2010) discussed the relative stability of depression in inner-city African American teen mothers and its negative impact on parenting satisfaction; teen mothers with the highest depression scores had the lowest parenting satisfaction. Parenting teens report higher parenting stress than do older mothers (Barnet et al., 1996; Holub et al., 2007; Ketterlinus, Lamb, & Nitz, 1991). Pawlby, Hay, Sharp, Waters, and O'Keane (2009) and Hammen, Shih, and Brennan (2004) discussed the intergenerational transmission of depression; Pawlby et al. (2009) found a fourfold increase in depressive symptoms in the teenaged children of mothers depressed during pregnancy. Hammen et al. (2004) also found intergenerational transmission but this relationship was completely mediated by psychosocial variables.

The Special Case of Teens in Foster Care

Teens in foster care are more likely to live in poverty and to have serious health and mental health problems than the general population of teens (Courtney, et al., 2005; Manlove et al., 2002; National Survey of Child and Adolescent Well-Being, 2008; Ruff & Baron, 2012; SCAA, 2009; W. B. Smith, 2011). The cumulative impact of pre-placement trauma, removal from biological families, and multiple placements or negative foster care experiences render them at greater risk for emotion regulation, attachment, mood, and behavioral disorders (Fisher, Gunnar, Dozier, Bruce, & Pears, 2006; Kools & Kennedy, 2003; Oosterman, De Schipper, Fisher, Dozier, & Schuengel, 2010; Pecora, Jensen, Romanelli, Jackson, & Ortiz, 2009; Vig, Chinitz, & Shulman, 2005; Sprang et al., 2009). Rates of mood, anxiety, substance use, psychotic, and conduct disorders, and

substance abuse are strikingly high compared to non-foster care children and youth (Bruskas, 2008; Dubner & Motta, 1999; Fisher & Gunnar, 2010; Keller et al., 2010; Kerker & Dore, 2006; Kools & Kennedy, 2003; Manlove, Welti, McCoy-Roth, Berger, & Malm, 2011; McMillen et al., 2005; Park, Solomon, & Mandell, 2006; Pecora, Jensen, Romanelli, Jackson, & Ortiz, 2009; Pilowsky and Wu, 2006; M. V. Smith, 2011; SCAA, 2009; Vig et al., 2005). Pregnant teens in foster care have a great deal of faith, possibly more than others, for the transformative power of their pregnancies as a means of starting anew, redoing their past trauma and disrupting the transmission of ACEs (Aparicio et al., 2015; Haight et al., 2009; A. Knight et al., 2006; Samuels & Pryce, 2008; Pryce & Samuels, 2010; Svoboda et al., 2012). They, also perhaps more than others, have the most notable accumulation of ACEs and stressors to contend with, and have been found to be resilient despite this cumulative adversity (Haight et al., 2009; Samuels & Pryce, 2009).

A "silent" risk factor for pregnant women in foster care, and those who have experienced ACEs and life-long adversity involves neuroendocrine changes secondary to mental health conditions that often accompany high stress. During pregnancy, the biological and behavioral alterations that often accompany depression and PTS can have negative consequences for prenatal health in women of all ages (Entringer, Kumsta, Helhammer, Wadhwa, & Wüst, 2009; Morland et al., 2007; Rosen et al., 2007; M. V. Smith, Poschman, Cavaleri, Howell, & Yonkers, 2006). A paradigm shift over the last several decades has been facilitated by an increasingly sophisticated and comprehensive understanding of, and a fostering of enhanced resources toward the impact of interpersonal violence on cognitive and emotional development, mental and physical health, and substance use over the life course. A discussion of ACEs, IPV, and mental

health follows, including a theoretical overview and review of empirical evidence for the relationship between interpersonal violence and deficits in prenatal health in both teen and adult pregnant women. Figure 2 depicts a simplified model of the trajectory in Figure 1, when few protective factors are available.

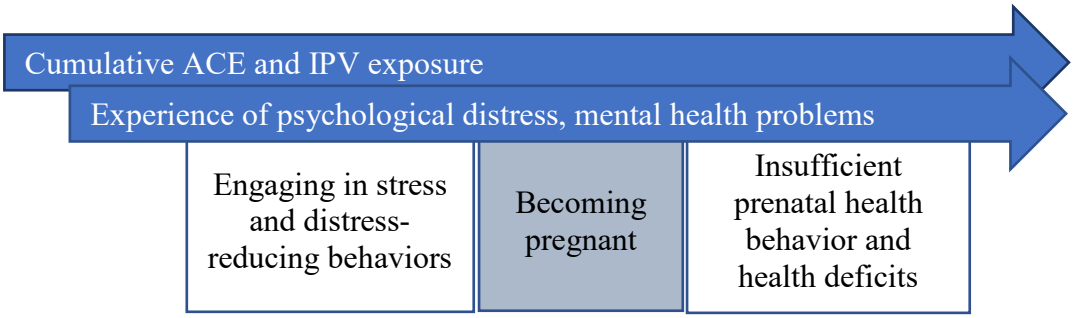

Figure 2: The Trajectory from Psychological Distress to Prenatal Health

Cumulative Trauma: Adverse Childhood Experiences

The word "trauma" originates from an ancient Greek term for injury or wound and is used to refer to a confusing array of experiences and events, including (a) a stressor or event(s), (b), a person's experience of that event, and (c) the posttraumatic, psychic response to the event (Weathers & Keane, 2007). The challenges of arriving at a valid consensus about what trauma actually comprises has rendered a clear and consistent definition elusive (Ford & Courtois, 2009; Weathers & Keane, 2007). The following section describes traumatic events over time as a form of cumulative risk, with a person's experience of and psychological response to these events to follow.

Type I and Type II Traumas: Incident Versus Interpersonal Trauma

Traumatic experiences loosely fall into two categories that have informed assessment of incidence as well as symptomatology. The first of these categories includes single incident trauma such as accidents, assaults or robberies, combat-related experiences, natural disasters, or witnessing, termed "Type I" traumas (Kessler et al,

1995; Terr, 1991). Incident trauma is often associated with the emergence of PTSD, as defined in the DSM IV-TR (APA, 2000). The first large epidemiologic survey to assess prevalence of trauma in the United States (Kessler et al., 1995) also defined trauma according to the then-current DSM (APA, 1980). The second category, "Type II" trauma, includes stressors that are prolonged or repetitive, occur at developmentally sensitive times, particularly ages 0–5 (Chu & Lieberman, 2010; Cicchetti & Toth, 2005; Hein, Cohen, & Campbell, 2005; A. N. Schore, 2001, 2003; J. R. Schore & Schore, 2008) or adolescence (Blakemore & Choudhury, 2006; Finkelhor et al., 2009; Habib & Labruna, 2011; Nader, 2008, 2011), and involve ACEs: all forms of child abuse or witnessing violence between caregivers or other important adults (Ford, 2010; Ford & Courtois, 2009; Herman, 1992; van der Kolk & D'Andrea, 2010). ACEs comprise Type II traumas, and can have severe, debilitating effects on a range of developmental, health and mental health outcomes (Anda et al., 2006; Chapman, Dube, & Anda, 2007; Chu & Lieberman, 2010; De Bellis, 2001; Dube, Anda, et al., 2002, Dube, Felitti et al., 2003; Dube, Miller et al., 2006; Felitti & Anda, 2010; Felitti et al., 1998; Furumoto-Dawson et al., 2007; W. W. Harris et al., 2007; Kendall-Tackett, 2013; Lansford et al., 2002; Larkin et al., 2012; Nurius et al., 2012; Shonkoff et al., 2012; Springer et al., 2007). ACE exposure is an external experience, yet, as Perry et al. (1995) eloquently stated in their seminal paper, it is one that "transforms a child's world into a terror-filled, confusing miasma that dramatically alters the child's trajectory into and throughout adult life" (p. 273).

Defining Cumulative Interpersonal Trauma

There are two features of early traumatic experience that contribute to the severity of mental health problems and functional impairment emerging over the life course, aside

from the age at which the trauma occurred: (a) the degree to which it was cumulative, and (b) whether it was interpersonal. ACEs are often both. First, exposure is considered cumulative when multiple events that are perceived as life threatening and/or provoke feelings of intense fear or helplessness co-occur over time (Finkelhor et al., 2009; Ford, 2011; Ford & Courtois, 2009; Ford, Elhai, Connor, & Frueh, 2010; Kennedy, 2008; Mullen, Martin, Anderson, Romans, & Herbison, 1996). The impact of cumulative ACEs on child, adolescent, and adult health and functioning has garnered increased attention as a major social problem, which exacerbates an unlevel playing field for people who are already subject to psychosocial disadvantage and stress (Larkin et al., 2012; Nurius et al., 2012; Shonkoff et al., 2012). Studying the long-term effects of ACEs through a single-factor, main-effect lens may inadvertently obscure the impact of an interaction between one type of trauma (e.g., child maltreatment) and others (e.g., witnessing IPV, community violence) on later functioning and health (Lynch & Cicchetti, 1998; Springer et al., 2007; Turner, Finkelhor, & Ormrod, 2006). Different types of trauma often co-occur in the same household over time (Anda et al., 1999; Dong et al., 2004) and may also be rendered more or less likely through interactions with risk or protective factors at concentric ecological levels, e.g., degree of social support, community violence, poverty (Belsky, 1993; Lynch & Cicchetti, 1998; Nurius et al., 2012; Sameroff, 2000).

Second is the interpersonal nature of ACEs, particularly where it is caregivers who are abusive. This is a complex issue because caregivers, in the best of circumstances, also act as behavioral and neurobiological regulators of an infant's emerging self-regulatory capacities (Fonagy et al., 2002; Lyons-Ruth & Block, 1996; Main & Hesse, 1990; J. R. Schore & Schore, 2008). When caregivers have themselves experienced

cumulative trauma and loss, these capacities may be absent or compromised, and they may be anomalous in their parenting behavior. Anomalous parenting can range on a continuum from atypical, frightened, or frightening behavior (see G. Green & Goldwyn, 2002; Lyons-Ruth, Yellin, Melnick, & Atwood, 2005; Madigan et al., 2006) to frank abuse, and thus parents themselves become the source of alarm (Fonagy et al., 2002; Lyons-Ruth et al., 2005; Madigan et al., 2006; Main & Hesse, 1990; Schuengel, Bakermans-Kranenburg, & van Ijzendoorn, 1999). This situation presents an irresolvable paradox for very young children, who may be at greater risk for disorganized attachment and distortions in mental representations of attachment relationships, deficits in self-regulation, and borderline personality disorder (Cicchetti & Toth, 1995; G. Green & Goldwyn, 2002; Lynch & Cicchetti, 1998; Lyons-Ruth, 2008; A. N. Schore, 2001, 2003).

The Adverse Childhood Experiences Study

Perhaps the largest investigation of cumulative interpersonal trauma was conducted under the auspices of the ACE study (Felitti et al., 1998; Felitti & Anda, 2010). The study was designed to systematically investigate not only the prevalence of ACEs, but also impact on a very broad range of health and mental health outcomes. This program of research had several weaknesses, including retrospective recall of ACEs, bivariate analyses, no assessment of severity, few psychometric studies of the instrument, a dearth of investigation into the long-term sequelae of trauma subtypes or of current IPV, age at which ACEs occurred, restricting the association between ACEs and IPV to that perpetrated by men only, and no assessment of PTS, the most common and deleterious consequence of ACE exposure. Given the low-risk nature of the very large

sample, the outcomes of the ACE studies still remain powerful and provide a much-needed window into the distal consequences of interpersonal trauma.

The two-wave study began in 1998 at the Kaiser Permanente Health Appraisal Center in San Diego in collaboration with the CDC, with a majority (80%) white, middle class population with health insurance. The impetus for the study was a pattern self-sabotage toward improved health that the authors observed among certain patients (V. Felitti, personal communication, June 8, 2012). The authors informally requested patients to surmise the etiology of their health problems; the inquiry revealed that most dropouts had interpersonal trauma histories that seemed in some way associated, albeit unconsciously, to self-defeating health behavior. This discovery commenced a wide-scale formal investigation of the association between cumulative ACEs and adult and mental and physical health and overall functioning. The ACE questionnaire comprised 10 categories of interpersonal trauma and was distributed to the Kaiser patient population after their initial health appraisal. Findings revealed that the general public as represented by this large sample is exposed to a considerable amount and accumulation of ACEs: 50% reported at least one, and 17% reported four or more ACEs. Exposure to four or more ACEs is associated with increased likelihood of deficits across the health and mental health spectrum. Exposure to any one category of ACEs increased the probability of exposure to additional categories, from 65% to 93% (Felitti et al., 1998).

As the study revealed, ACEs are endemic and are linked to negative outcomes across the lifespan on multiple health and mental health indicators. More nuanced work could foster a clearer understanding of the developmental sequelae of ACEs as well as add to the sophistication and relevance of interventions. Factors that should be addressed

include frequency and severity of ACE exposure (Cicchetti & Toth, 1995), cumulative and interactive nature of ACEs (Felitti et al., 1998; Kendall-Tackett, 2013; Lynch & Cicchetti, 1998; Margolin & Gordis 2000), developmental periods during which children are most vulnerable (Margolin & Gordis, 2000), and how subtypes of ACEs are operationalized (Barnett, Manly, & Cicchetti, 1993; Manly, Cicchetti, & Barnett, 1994).

Clinical Symptoms: ACEs, PTSD, and Posttraumatic Stress

Clinical symptoms of PTS are manifestations of psychological attempts to make sense out of witnessing or surviving a violent or traumatic event by those who have had such an experience, and to tolerate its emotional impact (Chu, 2011; Ford & Courtois, 2009; Herman, 1992). The main clinical criteria for PTSD described in the *DSM V* (APA, 2013) included the following four phenomena: (a) exposure to a traumatic event; (b) intrusive recollection; (c) avoidance/numbing; (d) hyperarousal, followed by required duration and degree of clinically significant distress, and a new, fifth criterion; (e) trauma-related physiological arousal and reactivity. People who experience ACEs are likely to experience PTSD, particularly women, and those who experience ACEs and adult sexual assault have been shown to be 17 times more likely than those with no history to develop PTSD (Schumm, Briggs-Philips, & Hobfoll, 2006).

With respect to diagnostic PTSD as defined in the *DSM*, Widom (1999) investigated the association between child maltreatment and PTSD symptoms as defined in the *DSM III-R* (APA, 1980). The study followed 1,196 children who were physically or sexually abused or neglected and had experienced a broad variety of Type I and Type II traumas, and a non-abused comparison group (n = 520) in a 20-year prospective study. Widom (1999) found that exposure to abuse before age 11 increased risk for developing

PTSD. As compared to the no-abuse group, over one-third of respondents with any type of abuse or neglect (30.95%, p < .001), with sexual abuse histories (37.55%, $p < .001$), with physical abuse (32.7%, $p < .01$), and those who were victims of childhood neglect (30.6%, $p < .001$) met *DSM-III-R* (APA, 1980) met criteria for lifetime PTSD.

Widom (1999) and Schumm, Stines, Hobfoll, and Jackson (2005) noted that these children likely experienced more than one type of ACE because these categories are rarely mutually exclusive. When child and family covariates commonly found in abusive and neglecting families (e.g., parents' substance use or arrest, having five or more children, respondents' own behavior problems) were introduced into an ordinary least squares analysis, Widom (1999) found that these factors were also independently associated with PTSD symptoms. When these covariates were entered into the equation, ACEs lost some predictive power for PTSD diagnosis but some ACEs, particularly sexual abuse, did continue to predict the number of PTSD symptoms. The question that was unanswered by this study involved the effect of later-occurring forms of trauma exposure on the emergence of PTSD symptoms and diagnosis.

Several studies have explored PTS in urban teen girls. These are discussed here as a proxy for investigations of the clinical sequelae of trauma in pregnant teens, a notably understudied area (DeRosa & Pelcovitz, 2006). Horowitz, Weine, & Jekel (1995) found, in a sample of 79 urban teen girls, that 73.4% had witnessed family violence and 34.2% been a victim, 15.2% had witnessed unwanted sexual contact in their homes and 13.9 had been victims, and 34.2% had witnessed an accident causing severe injury and 17.7% had been victims, all before the age of 13. These teens experienced an average of 28 violent events, all told. Of these teens, 67% met criteria for PTSD, with high rates of symptoms

in each of four PTSD clusters; total trauma scores correlated highly with PTSD diagnoses, $r = .63$, $p = .0002$. Lipschitz, Rasmusson, Anyan, Cromwell, and Southwick (2000) found, in a sample of 90 urban teen girls, that 92% had witnessed one traumatic event, mostly community and family violence. Cumulative exposure was also common; 31.2 % had also witnessed domestic violence, 36.6% were victims of physical violence, 22.3% were victims of sexual assault, and 27.7% were perpetrators of assault, all more than once. More than 14% of the 90 urban teen girls met PTSD diagnostic criteria with 61.4% of these young women reporting individual symptoms, including re-experiencing, 30.1%, avoidance, and 28.9%, hyperarousal. Girls with PTSD had more psychiatric comorbidity, particularly depression, and were more likely to smoke cigarettes and marijuana. Both studies revealed that these teens were exposed to cumulative ACEs at the family and community level, and were highly likely to experience PTSD as well as comorbidity with other psychiatric illnesses and with substance use. Although the girls in these studies were not pregnant, these data signify a baseline of raised risk for a group likely to become pregnant.

A concern for pregnant women of all ages with PTSD is the common comorbidity with substance use (De Bellis, 2002). Ouimette and Brown (2003) and Najavits, Weiss, and Shaw (1997) noted that about 30% of people receiving treatment for substance use disorders, whether alcohol or illicit drugs, have received a comorbid PTSD diagnosis resulting from a complex child maltreatment history (Najavits et al. 1997) or combat-related trauma (Ouimette, Moos, & Finney, 2003). This is a particularly serious problem during pregnancy, as women with PTSD and depression are more likely to use substances and tobacco (Lopez et al., 2011; Seng et al., 2008), and during teen pregnancy, when the

likelihood of engaging in risk behavior and of relying on substance use to regulate difficult emotional states is greater at baseline.

PTSD Versus Complex PTS

In recent years, trauma-focused clinicians and researchers alike have recognized that survivors of cumulative ACEs (Type II trauma) present a different clinical picture than do those who have experienced single incident trauma (Type I trauma), and that a diagnosis of PTSD may not capture the clinical constellation of posttraumatic symptoms in youth or adults with ACE histories. While criteria for PTSD are often met by people who have witnessed or been victims of any type of trauma, cumulative exposure to ACEs is associated with greater likelihood of developing complex posttraumatic stress (C-PTS, Briere et al., 2008; Chu, 2011; Cloitre, Miranda, Stovall-McCIough, & Han, 2005; Cloitre et al., 2009; Cook et al., 2005; D'Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012; Gerson & Rappaport, 2013; Jonkman, Verlinden, Bolle, Boer, & Lindauer, 2013; Pelcovitz, Kaplan, DeRosa, Mandel, & Salzinger, 2000; Spinazzola et al., 2014; van der Kolk, 2014; van der Kolk & D'Andrea, 2010), often comorbid with other psychiatric diagnoses (Briere, Hodges, & Godbout, 2010; Briere & Jordan, 2009; P. Cohen, Browne, & Smailes, 2001; B. L. Green et al., 2000; Hein et al., 2005; Springer et al., 2007). The construct of C-PTS includes dysphoria (anxiety, irritability, and depression) and problems with self-regulation (impaired self-reference, tension-reducing behavior, relationship difficulties), in addition to PTS (intrusive experiences, dissociation, defensive avoidance) (Briere et al., 2008; D'Andrea et al., 2012; Gerson & Rappaport, 2013).

ACEs: Rates of Interpersonal Violence Exposure Among Teens

With respect to sensitive time periods, findings from empirical work over the last two decades indicate that teens in the United States (Arata, Langhinrichsen-Rohling, Bowers, & O'Brien, 2007; Finkelhor, Ormrod, & Turner, 2007; Finkelhor et al., 2009; Ford et al., 2010; Hashima & Finkelhor, 1999) and internationally (Elklit & Petersen, 2008) have reported experiencing a comparatively higher rate of ACEs and violence than have adults (i.e., those over age 18). This phenomenon occurs for lifetime exposure (Finkelhor et al., 2009) and past-year violence (Renker, 2002; Hashima & Finkelhor, 1999). The reasons for this disparity may include teens' dependent status, exposure to violent adults, and greater risk-taking propensity (Hashima & Finkelhor, 1999). In addition, teens' lack of experience with romantic attachment, tendency to obfuscate love and control or jealousy (Weimann, Agurcia, Berenson, Volk, & Rickert, 2000), reluctance to seek assistance from adults, and their own ACE history may render them more vulnerable to violence or coercion in relationships (Wekerle & Wolfe, 1998; Wolfe, Scott, Wekerle, & Pittman, 2001).

Literature on the developmental, behavioral, and psychological impact of ACE exposure in children and teens is extensive. It extends far beyond the ACE study findings and necessitates a broader review than the present review can afford it. Following a CAD perspective, it is nevertheless important to discuss briefly here because the impact of cumulative ACEs can have grave consequences for the transition to adolescence, and for the experience and outcomes of teen pregnancy and parenting (H. N. Bailey et al, 2007; Bert, Guner, & Lanzi, 2009; Budd, Holdsworth, & HoganBruen, 2006; Max & Paluzzi, 2005; Milan, Lewis, Ethier, Kershaw, & Ickovics, 2004). Several researchers have

addressed existing gaps in the literature regarding teens' exposure to ACEs and IPV have found that approximately 60-65% of American teens report exposure to violence. Finkelhor et al. (2009) conducted a large study, the National Survey of Children's Exposure to Violence, which consisted of 3,053 responses to 4,549 telephone interviews with children up to age 17 over a five-month period in 2008 using the Juvenile Victimization Questionnaire (Finkelhor, Ormrod, Turner, & Hamby, 2005). Finkelhor et al. (2009) found widespread exposure to trauma in youth: 60.6% of those surveyed had directly experienced or witnessed one or more types of violence. Their study added to the literature because it provided an additive measure, missing from many other studies: it revealed that more than 10% of teens had been exposed to five or more forms of direct victimization in the year prior to the study, and that having one type of exposure increased the likelihood of others, as in the ACE study, but for teens.

Other studies investigating the prevalence of traumatic experience among youth report similar findings. Arata et al. (2007) investigated ACEs specifically in a sample of 1,452 middle school children. They found that approximately 60% reported some type of abuse and that 13% reported multitype exposure: physical and sexual abuse and neglect. B. L. Green et al. (2000), in a survey of 1,900 college sophomores, also found a 65% incidence rate of exposure to a combination of Type I and Type II traumas, with a larger number, 38% of respondents, reporting exposure to two or more events.

Teens' disproportionate exposure to interpersonal violence has intensified the focus on the sequelae of these experiences. Numerous studies have investigated the association between cumulative ACEs, also termed polyvictimization (Ford et al., 2010), and inferior outcomes in several domains in teens and young adults (Briere & Jordan,

2009; Cloitre et al., 2009; Copeland, Keeler, Angold, & Costello, 2007; V. J. Edwards, Holden, Felitti, & Anda, 2003; Schilling, Aseltine, & Gore, 2007). Although these studies were retrospective and varied considerably in methodology and power, ACEs are predictive of substance use (Arata et al., 2007; Ford et al., 2010; Hein et al., 2005; Kilpatrick et al., 2003) but this association may be mediated by other factors (Wilson & Widom, 2009) and by substance use at earlier time points (Lansford, Dodge, Pettit, & Bates, 2010). ACEs are also associated with depression and anxiety (Arata et al., 2007; P. Cohen, et al., 2001; Copeland et al., 2007; V. J. Edwards et al., 2003; Ford et al., 2010; B. L. Green et al., 2000; Kilpatrick et al., 2003; Lansford et al., 2002; Luster, Small, & Lower, 2002; McKay, Lynn, & Bannon, 2005; Nurius et al., 2012; Wolfe et al., 2001). E. G. Flaherty et al. (2013) utilizing the year 14 wave of the Longitudinal Study of Child Abuse and Neglect (Runyan et al., 1998) found a linear relationship between cumulative ACEs and increasing physical health problems in the 14-year wave of the study. Rates of diagnostic PTSD are also elevated (Gerson & Rappaport, 2013; B. L. Green et al., 2002; Hein et al., 2005; Horowitz et al., 1995; Lansford et al., 2002; Lipschitz et al., 2000; Pelcovitz et al., 2000; Widom, 1999; Wolfe et al., 2001). Many youth reported witnessing violence between family members; Born (2012), Jouriles, Mueller, Rosenfeld, McDonald and Dodson, (2012) and Hamby, Finkelhor, and Turner (2012) note that these children are more likely to become victims when entering into their own intimate relationships.

In one of only a few prospective investigations, Lansford et al. (2002) conducted a longitudinal study on the impact of physical abuse occurring before age five on long-term outcomes for teens in multiple academic, behavioral, and psychological domains. As part of the Child Development Project (Dodge, Bates, & Pettit, 1990), parents of 585

children were queried as to whether the children had been physically abused. Both mothers and teens themselves reported on outcomes when teens were in 11th grade, when the sample included 53 remaining children. Analysis of covariance revealed that those who had originally reported as having been abused had significantly higher rates of anxiety and depression and of PTSD. These teens also experienced more externalizing behavior, social withdrawal, lower chances of attending college, poor peer relations, cognitive problems, and days absent from school. Lansford et al. (2002) controlled for covariates associated with physical abuse (e.g., SES, single parenthood, family stress, maternal social support, child temperament, child health problems, exposure to family violence) and assessed differences in outcomes between abused and non-abused children. Results held for seven of the eight dimensions; for mental health, $p < .01$ for PTSD and $p < .001$ for anxiety and depression, but were stronger for girls. In addition, Lansford et al. (2002) assessed the number of problems experienced by children by abuse status; 21% of maltreated children had more than three negative outcomes, versus 7% of non-abused youth. They concluded that physical abuse doubled the risk for all outcomes investigated.

Strengths of this study included utilizing a community rather than a clinical sample which reduced threats to external validity, the inclusion of numerous outcome variables, control of for several relevant covariates, testing interaction effects with gender and ethnicity, and a prospective design. There were several weaknesses, the most notable of which were lack of inclusion of or control for other types of abuse, parental self-report, and a dichotomous rather than nuanced measure of physical abuse. Despite the weaknesses, these outcomes add to the existing evidence of the persistent corollaries of physical maltreatment in the earliest years of life. As Lansford et al. (2002) stated,

additional prospective work is needed to identify the mechanisms through which maltreatment exerts its negative effects on development. They proposed, as did others (Chu, 2011; Ford, 2005; Maughan & Cicchetti, 2002; Perry et al., 1995, 1998; Teicher et al., 2010; van der Kolk, 2014) that this mechanism may involve deficits in affect regulation, a hallmark of C-PTS.

ACEs and Pregnancy

A social problem that has garnered an intensified research focus involves the impact of ACEs and current IPV on pregnancy. Aside from infant birthweight, the outcome variable most often investigated is maternal mental and physical health during pregnancy (Gilson & Lancaster, 2008; Kendall-Tackett, 2007; Sharps, Laughon, & Giangrande, 2007; Taillieu & Brownridge, 2010, A. D. Weinstein, 2016). Empirical work (see Gavin, Hill, Hawkins, & Maas, 2010; Janssen et al., 2003; Johnson, Hellerstedt, & Pirie, 2002; Koniak-Griffin & Lesser, 1996; M. R. Kulkarni et al., 2011; Leeners, Stiller, Block, Görres, & Rath, 2010; Lopez et al., 2011; Min et al., 2007; Noll et al., 2007; Renker, 1999; Seng et al., 2008; Stevens-Simon & McAnarney, 1994) and reviews (see Horan, Hill, & Shulkin, 2000; Leeners, Richter-Appelt, Imthurn, & Rath, 2006) have focused on the impact of ACEs, although more studies concentrate on current IPV (see Alhusen, 2011; Alhusen et al., 2013; B. A. Bailey & Daugherty, 2007; Campbell et al., 1999; Coker, Sanderson, & Dong, 2004; Curry et al., 1998; El Kady, Gilbert, Xing, & Smith, 2005; Lopez et al., 2011; Moraes et al., 2006; C. C. Murphy, Schei, Myhr, & Du Mont, 2001; Parker, McFarlane, & Soeken, 1994; Renker, 1999; Rosen et al., 2007; Sarkar, 2008; Seng et al., 2008; Shah & Shah, 2010; Shumway et al., 1999).

The effects of ACE history and current IPV on pregnancy, gestational outcomes, and parenting are far-reaching and warrant greater attention from a risk identification perspective to support a stronger programmatic response, both preventive to protect women and infants, and ameliorative regarding the impact of abuse that has already taken place. These effects also warrant a biopsychosocial perspective to help determine the mechanisms through which trauma exposure exerts its damaging effects on gestation through alterations in the stress-response system. Because pregnant teens are known to experience ACEs disproportionately, increased attention to the impact of abuse history and current IPV on teens' prenatal health and pregnancy outcomes is warranted.

ACEs and IPV in Pregnant Teens

Teens who become pregnant report experiencing more ACEs than non-parenting teens. One longitudinal study (Herrenkohl et al., 1998) found that 96% of the 179 girls who became parents experienced early ACEs, either physical or sexual abuse, or neglect. Teens' IPV exposure increases with pregnancy. With respect to current IPV, quantitative studies have shown that the reported rate of abuse (physical battering) in the year preceding pregnancy in the general adult population varies from 8.8 to 29.7%, and during pregnancy from 0.9 to 65% (see Covington, Dalton, Diehl, Wright, and Piner, 1997; Curry et al., 1998; Harris-Britt, Martin, Casanueva, & Kupper, 2004; Madkour, Xie, & Harville, 2014; S. L. Martin et al., 1999). Compared to adult women, teens are consistently more likely to experience physical violence during pregnancy (Covington et al., 1997; Covington et al., 2001; Kennedy, 2006; Kingston et al., 2012: Madkour et al., 2014; S. L. Martin et al., 1999; Quinlivan & Evans, 2001; Renker; 1999, 2002; Weimann et al., 2000). Outcomes may vary as a function of differences in how violence

and assault are defined and methodological inconsistencies (Luxardo, Colombo, & Iglesias, 2011), but teens are consistently at increased jeopardy. This is discussed here as a measure of risk during the sensitive prenatal phase as IPV is associated with low birth weight and preterm birth (Alhusen et al., 2013; Moraes et al., 2006; Sharps, Laughon, & Giangrande, 2007; Taillieu & Brownridge, 2010).

The Center for Impact Research (2000) reports that 55% of the 474 parenting teens in their sample had experienced IPV in the 12 months prior to the study. Weimann et al. (2000) reported on differences in experiences of physical assault during pregnancy between teens and adults. These authors estimated that 5.4% to 37.6% of all adolescent girls experienced physical violence while pregnant or during the prior year, compared with 4% to 23.6% of pregnant adult women. Parker et al. (1994) reported a rate of 20.6% in teens and 14.2% in adult women in an aggregate sample of 1,203 women. Kennedy (2006) conducted a systematic review of all types of violence experienced or witnessed by pregnant teens and found a prevalence rate of lifetime interpersonal violence ranging from 12% to 50%. Kennedy and Bennett (2006), in a sample of 120 urban teen mothers, examined cumulative exposure to community violence, witnessing family violence, familial physical abuse, and intimate partner violence. They found 98% reported experiencing at least one form of current violence, with as many as 75% reporting lifetime exposure to at least three of the four types. As Born (2012) noted in her review of the current literature on relationship violence in teens, as have others (Hamby et al., 2012; Hamby, Finkelhor, Turner & Ormrod, 2010; Jouriles et al., 2012; Wolfe et al., 2001), teens who have experienced ACEs are more likely to be re-victimized through IPV by entering violent relationships in adolescence and adulthood.

Renker (1999) conducted a multivariate study on the impact of ACEs and IPV with 139 teens recruited from several prenatal clinics in an ethnically diverse urban setting, all of whom were living below the poverty line and eligible for WIC. This study is relevant here as it explored the impact of current and past abuse, self-care agency and practices, and social support on birthweight. Teens who experienced IPV during pregnancy were significantly more likely to have low birth weight infants. The mean weight for infants of non-abused mothers was 3,144 grams, and for abused mothers, 3,310 grams *(t* = 1.99; *p* = .025). Teens' self-care was also assessed with two psychometrically sound scales. Renker (1999) found that self-care agency, conceptualized through Orem's self-care deficit theory of nursing (Orem, 1985) and measured with the Denyes Self-Care Agency Instrument (Denyes, 1981), and self-care practices, through the Denyes Self-Care Practices Instrument (Denyes, 1981), both modified for pregnancy by Jesek-Hale (1995), were also predictive of birthweight. Of note, teens who were abused during pregnancy had significantly lower self-care agency (*t* = 3.08; *p* = .001) and self-care practices (*t* = 1.89; *p* = .03) scores than those who were not. Renker (2002) then conducted a narrative analysis; teens' stories of abuse indicated cumulative ACEs over their life course and current IPV, resulting in miscarriage in four cases. This is the only study that explored the impact of interpersonal violence on pregnancy self-care, as well as that capstone of measures, birthweight, and provides a compelling case to propose additional research.

Qualitative Studies: ACEs and Pregnancy in Teens

There are few studies generally that explore the impact of violence and abuse in the lives of pregnant teens on their experience of, or state of mind during pregnancy (but

see Madigan et al., 2012; Williams & Vines, 1999) or parenting (see Lyons-Ruth & Block, 1996; Madigan et al., 2006; Schweitzer, 2013). Several qualitative studies explore the experience and meaning of abuse and violence, prior to and during pregnancy (Aparicio et al., 2015; Gilson & Lancaster, 2008; Renker, 2002; Kennedy et al., 2010), and during early motherhood (Kennedy, 2005). Kennedy et al. (2010) found, in their grounded theory study of risk chains over the life course in 14 homeless pregnant teens residing in a shelter that all had experienced abuse, abandonment, and loss in early life and a "pile up" of these adversities in early adolescence. Their experience with shelter staff had become the only positive interaction with supportive adults.

Kennedy et al. (2010) argue that these teens' identity development was inextricably intertwined with defensive responses to violence. Bouts of fighting, positioned as self-defense, repeatedly got these teens in trouble at school and with family; however, as Ungar (2004) has argued, they may be conceptualized as adaptive responses to severe threat. Kennedy (2005) conducted another grounded theory exploration with urban adolescent mothers and found that all had experienced severe, cumulative ACEs in their families of origin and violence in their communities. Eight of these teens in this study had experienced violence in their neighborhoods; often this violence affected family members directly. Seven teens had been beaten severely by parents or other close family members, and eight were involved in IPV with the father of their recent baby. Four of these young women experienced all subtypes of violence.

Williams and Vines (1999) conducted the only other qualitative study that specifically investigated teens' perception of how the impact of their own experience of ACEs in turn affected their transition to parenthood. In their phenomenological study

with 20 teen mothers attending a community-based parenting program, the authors found that teens experienced a plethora of ACEs at the hands of caregivers, disintegration of relationships over time, purposeful distancing from the emotional content of memories, and the perception of pregnancy as "problem fixing"—a positive turning point. They also found that teens utilized their new role to reconnect with important figures from their pasts, renew attachment bonds and find more reliable mates. Williams and Vines (1999) did not inquire about, and therefore did not suggest what factors might have underscored teens' perceptions of pregnancy as a hopeful event and a bridge toward building more positive relationships. They argued that helping professionals working with teen parents must attend to these narratives as they differ from the prevailing pessimistic standpoint on pregnant and parenting teens' future possibilities. Other studies (see Madigan et al., 2006; Schweitzer, 2013) concentrate on the more psychodynamic outcomes of past abuse on teens mothers' attachment representations, and the eventual risks to mother-infant interactions of teens' projections of their own internal working models onto their infants. The current study also inductively explored teens' feelings toward their unborn infants as a means of assessing their prenatal attachment.

The Construct of Maternal Fetal Attachment

Maternal-fetal attachment[6] (MFA) is broadly conceived of as a bond to an unborn infant. Over the course of pregnancy, a woman turns increasingly inward toward her unborn baby. Maternal-fetal attachment has been defined alternately as the "extent to which women engage in behaviors that represent an affiliation and interaction with their unborn child" (Cranley, 1981, p. 282), the "unique, affectionate relationship that develops between self and fetus" (Müller, 1990, p. 11), or an "emotional tie or bond to an unborn

[6] Maternal-fetal attachment and prenatal attachment are equivalent terms and may be used interchangeably.

infant" (Condon, 1993, p. 167). While prenatal attachment had its origins in classic attachment theory, operationalized measures (see Condon & Corkindale, 1997; Cranley, 1981; Müller & Mercer, 1993) do not assess the activation of the post birth attachment system as described originally by Bowlby (1969, 1973, 1980), Ainsworth et al. (1978), and Main and Hesse (1990), because the infant as the initiator of the attachment response in caregivers is not yet present (Laxton-Kane & Slade, 2002; Pajulo, Helenius, & Mayes, 2006; J. Walsh, 2010). Prenatal attachment is more likely emblematic of the desire to protect: the activation of the caregiving system (Solomon & George, 1996, 2008; J. Walsh, 2010), and reflects a mother's own cognitive representations of herself as a caregiver, which, in a manner of speaking, is an extension of her own history and organizing framework around attachment (Laxton-Kane & Slade, 2002).

Over time, a pregnant woman will generally start to perceive her unborn infant as an individual, particularly after quickening (fetal movement), which usually begins at about 18 weeks (Lerum & LoBiondo-Wood, 1989). This is now furthered through the availability of ultrasound, which enhances MFA, particularly in the first trimester (Rustico et al., 2005; Sedgmen, McMahon, Cairns, Benzie, & Woodfield, 2006). Through an amalgam of fantasy and reality, the fetus becomes increasingly imbued with human qualities and in psychoanalytic parlance, projected into and invested with narcissistic love (Deutsch, 1945). The formal study of pregnant women's relationships with their unborn infants emerged over the 1960s and 1970s and involved a majority of white, middle-class women. It began as an extension of the conception of "primary maternal preoccupation" (Winnicott, 1992, p. 300) and continued with Bibring and Valenstein (1976), who discussed a pregnant woman's role transition, Leifer (1977), who focused on the manner

in which mothers began to interact with and behave toward their fetuses, and R. Rubin (1976), who delineated four well-referenced tasks of pregnancy: seeking safe passage through birth, forming a bond with the unborn infant, ensuring the child is accepted by family, and giving of self.

Most women form mental representations of unborn infants by the second trimester. These attachment representations are termed internal working models *of the child* (Zeanah & Benoit, 1995) or the parental "reflective function" (Slade, 2005, p. 2). Models of interpersonal interaction with others are schemas that emerge within the first two years of life from interactions with primary caregivers, including instances of abuse or loss. These schemas are carried forward into adolescence and adulthood and consequently make their way into the prenatal and parenting relationship, generally past the second trimester, much the way attachment style does (Laxton-Kane & Slade, 2002). Internal working models have significance for the prenatal relationship as well as early motherhood (Ammaniti et al., 1992; Malone, Levendosky, Dayton, and Bogat, 2010; Pajulo et al., 2001). Although their impact on ensuing relationships may be mediated to an extent by other experiences of attachment, these schemas tend to remain stable as a model for the post-birth relationship (Dayton, Levendosky, Davidson, & Bogat, 2010; Malone et al., 2010; Siddiqui et al., 2000).

Maternal-Fetal Attachment and Other Forms of Attachment

Studies conducted to investigate the relationship between MFA and other aspects of attachment in adult women have varied in their outcomes (see Cannella, 2005). Some have found associations between weak maternal-fetal attachment and adult attachment insecurity (Condon & Corkindale, 1997; Mikulincer & Florian, 1999; Priel & Besser,

2000) and tendency for aggression and irritation toward the fetus (Pollock & Percy, 1999). Siddiqui et al (2000) found that MFA scores reflected a woman's recall of early childhood interactions (Siddiqui et al., 2000). Maternal fetal attachment was also moderately associated with post birth mother-to-infant attachment (Müller, 1996), the related construct of maternal sensitivity and involvement (Shin, Park, & Kim, 2006; Siddiqui & Hägglöf, 2000), and prenatal health behavior (Alhusen, 2011; Laxton-Kane & Slade, 2002; Lindgren, 2001, 2003; Shieh & Kravitz, 2006). A mother's level of prenatal attachment has meaning for infant health and development if it is associated with other salient aspects of the pre- and post-birth relationships (Ammaniti, Tambelli, & Odorisio, 2013; Feldman, 2012; Pajulo et al., 2001). The relationship between MFA and post-birth interactions has been explored, yielding equivocal results but with some positive associations (K. C. Bloom, 1995; Cannella, 2005; Luz, George, Vieux, & Spitz, 2017; Siddiqui & Hägglöf, 2000).

Quantitative and Qualitative Contributions

Only a few quantitative studies have directly investigated MFA in pregnant teens (see K.C. Bloom, 1995; Koniak-Griffin, Lominska, & Brecht, 1993; Wayland & Tate, 1993) and this scarcity has been noted (Allen, 2008; K.C. Bloom, 1995; Feldman, 2012). Qualitative studies, aside from the current study, have inductively gleaned valuable information about teens' feelings toward their unborn infants. Through qualitative work, teens have had the opportunity to express their feelings of attachment prenatally and during the transition to motherhood. Data from several studies that explored teens' experiences of pregnancy has shown some of the clearest evidence that the mother-infant relationship begins well before birth, and with many teen mothers is imbued with a sense

of hope and a chance to rework their early attachment deficits. The narratives of teens in these studies provide an insider perspective on the meaning of their babies as they imagine rewriting history in a sense, to form a bond with their infants and assume a maternal identity. For example, one of the teens in Aparicio's (2016) study on teens' desire to "break the cycle" of abuse, discussed her baby daughter while recalling violent threats from her own mother, "Not saying that I was put here to have children but, I mean, now I feel like I have steady ground because of her. You know, I don't have to keep asking why should I even be here—I know why I am here, you know, I need to be a mom." (p. 608). Teens in foster care in Pryce and Samuels' (2010) study looked back at their own pasts and asked, "Why couldn't my mom be the mom I am trying to be?"

Macintosh and Callister (2015) explored teens' nascent incorporation of a maternal identity; one teen imagined her unborn baby boy by stating, "I want to give him everything in the world" while another reified her projected hope by saying, "I hope she's energetic, happy, jumping around everywhere, playful, always wanting to do something." In their work with teens in care, A. Knight et al. (2006), found that teens saw their babies as providing love they had not received, and one teen stated, "It's like having someone of your own to love as I'd never had that, and especially if you've been on your own a lot like me. I think that's why I was so over the moon when I got pregnant. It's almost like you have given yourself a purpose, some security…I think that's why people in homes may have them," while another stated, "The only friend I've got is my baby. And that's why I said I would keep my pregnancy because I've got no family. And if I have my baby, that's one close family that will never lose me."

The literature on maternal-infant attachment in teen *mothers* has grown substantially (see H. N. Bailey et al., 2007; Broussard, 1995; S. C. Flaherty & Sadler, 2011; Hans & Thullen, 2009; Mayers & Siegler, 2004; Ward & Carlson, 1995. with the veritable explosion of theoretical and empirical work on attachment generally in the past several decades. Most of the studies of MFA in teens investigated its relationship to social support in the context of other demographic and psychosocial variables (K.C. Bloom, 1995; Feldman, 2007; Koniak-Griffin et al., 1993; Wayland & Tate, 1993), but in addition, to its relationship with attachment and trauma. Pregnant and parenting teens may be less likely to form secure relationships with their infants, due in part to their increased risk of ACE exposure in early life and their own attachment insecurity. Rates of insecure and disorganized attachments are often higher among teen mothers than among infants of older mothers (S.C. Flaherty & Sadler, 2011; Lounds, Borkowski, Whitman, Maxwell, & Weed, 2005; Lyons-Ruth & Block, 1996; van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999; Ward & Carlson, 1995).

Maternal-Fetal Attachment, ACEs, and Traumatic Stress

ACEs occurring early in life can have an impact on the formation of a secure attachment relationship with caregivers, or if occurring later in childhood, can derail a previously secure attachment (H. N. Bailey et al., 2007; Fisher & Gunnar, 2010; Lyons-Ruth & Block, 1996; Schechter & Wilheim, 2009). While there is much supporting evidence for the long-term health and mental health impact of ACEs, there is not as much awareness of the insidious impact of ACE exposure and ability to parent responsively. It would be unlikely that the demonstrated health and mental health sequelae of ACEs in combination with entrenched environmental stressors would not challenge the capacity

for sensitive parenting (A. Murphy, Steele, Steele, et al., 2014). Pregnant women with ACE histories may develop unconscious negative representations of their unborn infants and be less likely to attach to or interact positively with their fetuses (Alhusen, 2011; Hart & MacMahon, 2006; Malone et al., 2010; Mayers & Siegler, 2004; Schwerdtfeger & Goff, 2007). Because of these representations, they may be at comparatively greater risk for dysregulated emotions around close relationships which may manifest in anomalous, neglectful or abusive behavior, both pre- and postnatally (Lyons-Ruth et al., 2005; Madigan et al., 2006; A. Murphy, Steel, Dube, et al., 2014; Schechter et al., 2008).

Several quantitative studies have investigated the relationship between prenatal attachment and other pregnancy-related variables in adult women. For example, Lindgren (2001, 2003, 2005) explored the relationship between prenatal attachment and prenatal health; Malone, et al., (2010), and Schwerdtfeger and Goff (2007) investigated the impact of interpersonal trauma history on prenatal attachment, and Alhusen (2011) considered the impact of IPV and psychological distress on prenatal attachment. A pregnant woman's internal mental representations of attachment and level and quality of prenatal attachment may both be affected by the type of trauma she has experienced (Malone et al., 2010; A. Murphy, Steele, Steele, et al., 2014; Schwerdtfeger & Goff, 2007) and clinical symptoms of depression and PTSD (Alhusen, 2011; B. A. Bailey et al., 2007).

Although few studies have explored the association between trauma type and prenatal attachment, Malone et al. (2010) investigated the differential impact of five types of ACEs as well as current IPV on internal mental representations of the infant using the Working Model of the Child Interview (Zeanah & Benoit, 1995), to determine the extent to which these representations were balanced (coherent, open, sense of being engrossed

with her infant), distorted (inconsistent, unrealistic expectations), or disengaged (emotional distance, indifference). Malone et al. (2010) found that a mother's history of physical neglect was the only form of abuse that predicted distorted prenatal representations, even with the experience of current IPV. The researchers speculated that physical neglect—a persistent, entrenched form of child maltreatment—had a stronger impact on the likelihood of distorted representations in pregnancy, particularly on mothers' expectation that children should be able to meet their own needs, as they themselves once did, providing some support for the intergenerational transmission of one subtype of ACEs. In another study, A. Murphy, Steel, Dube, et al. (2014), provided 75 inner-city women with both the ACE and the Adult Attachment Interview (AAI, George, Kaplan, & Main, 1996). They found that 84% of this very high-risk sample experienced more than four ACEs, and that 65% of these women also scored as Unresolved/Cannot Classify, an attachment classification predictive of anomalous parenting behavior and disorganized attachment in infants (Lyons-Ruth et al., 2005; Madigan et al., 2006). These authors also found that the experience of physical violence on the ACE survey was the greatest predictor of Unresolved attachment, and that social support on the ACE survey decreased probability of Unresolved status.

Even fewer studies have explored the relationship between trauma type, PTS, and prenatal attachment. One such study was conducted by Schwerdtfeger and Goff (2007). These researchers drew a conceptual bridge between a pregnant woman's trauma exposure, C-PTS rather than PTSD, and MFA, with the latter as the outcome variable. In a small sample (n = 41) of low-income pregnant women attending a public health clinic, the authors tested the hypothesis that mothers who reported experiences of ACEs and

IPV over their life course (child maltreatment, rape, domestic violence, violent crime), rather than noninterpersonal trauma (natural disaster, witnessing an accident, being seriously injured) would report lower MFA and more symptoms of PTS. Trauma history was assessed with the Traumatic Events Questionnaire (Vrana & Lauterbach, 1994) and PTS with the Trauma Symptom Inventory (TSI, Briere, Harris, Cotman, 1995). The Maternal Antenatal Attachment Scale (MAAS, Condon, 1993) assessed MFA.

Not surprisingly, the total number of traumatic events correlated significantly with trauma symptoms, r =.51, p < .01. Schwerdtfeger and Goff (2007) explored the differential effects of interpersonal versus non-interpersonal trauma history. The results of a univariate ANOVA showed that a history of interpersonal, but not non-interpersonal trauma distinguished significantly between the groups on the TSI, F (1, 39) = 8.39, p < .01. It also distinguished between the groups on responses to the MAAS, F (1, 39), = 4.70, p < .05, providing support for the hypothesis that mothers with an ACE history would endorse significantly more PTS symptoms and report lower prenatal attachment than would those reporting non-interpersonal trauma.

Alhusen (2011) investigated this relationship in a sample of 166 low-income, urban, African American pregnant adult women. With MFA as the outcome variable, Alhusen (2011) investigated the impact of current IPV, measured with the Abuse Assessment Screen (Soeken, McFarlane, Parker, & Lominack, 1998) and a latent variable of maternal mental health in the form of depression, assessed with the Edinburgh Depression and Postpartum Depression Scale (Ryan, Mills, & Misri, 2005), together with PTSD, assessed with the Davidson Trauma Scale (Davidson et al., 1997). Women in this study had very high scores on the Edinburgh scale (59%) and PTSD on the Davidson

scale (48%). Lifetime prevalence for major depression in the general population stands at about 16% (Kessler et al., 2003) and, for PTSD, from 7.8% to 12.3% (Kessler, 2000).

Although the small number of participants reporting IPV (n = 32) limited the power of this finding, the results of this investigation supported the principle hypothesis. Simple linear regression on the influence of IPV, the latent variable of emotional health (depression and PTSD), and the interaction of IPV and emotional health on prenatal attachment showed that while IPV initially predicted prenatal attachment, although with a fair margin of error, β = -11.64, CI: [-16.9, -6.4], p < .001, emotional health, when added to the model, predicted MFA, β = -12.67, CI: [-14.5, -10.9], p < .001 and fully mediated the relationship between IPV and MFA in this model. The study did not separate the differential impact of depression from PTSD, a distinction that could provide some validation for the sparse but growing literature on PTS and PTSD during pregnancy. Despite this shortcoming, the study provides some support for the impact of mental health problems on MFA, in adult women.

In one of the few qualitative studies that specifically explored mental health and pregnancy, Alhusen et al. (2012) reported on a qualitative component of the study discussed above to explore, in these women's own words, the impact of depression on maternal-fetal attachment. The qualitative component was included to explore and perhaps elucidate the results from depression and MFA surveys. Twelve women out of their total sample (n = 166) agreed to participate in an in-depth interview to explore the impact of mood state and prenatal attachment. These authors found that women considered the degree of social support from the baby's father to be the element that determined whether their depressed mood affected their relationship to their fetus, and

without social support, they experienced lower mood and less attachment to and love for their fetus. This finding was not replicated in the current study with teens, most of whom considered the baby itself to be a motivator and an energizer toward positive mood states and a hopeful future, regardless of perceived or expected level of social support from the father of the baby (FOB).

Maternal-Fetal Attachment and Prenatal Health Behaviors

Condon (1993) and Condon and Hilton (1988) noted that whether a pregnant woman protects her fetus from harm and ensures its health and well-being may be a function of the quality and quantity of her prenatal attachment. Developing a strong bond, or "love," toward the fetus may preclude any risk of harm, abuse, or neglect (e.g., avoiding behaviors with teratogenic potential, poor nutrition, avoiding care) (Condon & Hilton, 1988). Strong prenatal attachment may signify resilience, in that it may militate against poor prenatal health behaviors during pregnancy (Alhusen 2011; Laxton-Kane & Slade, 2002; Lindgren, 2001; 2003). There is also speculation (Lindgren, 2001) that engaging in better prenatal health behavior may have a reciprocal positive impact on prenatal attachment. Lindgren (2003) investigated the association between prenatal depression, MFA, and prenatal health behaviors in a low-income inner-city sample of pregnant women (n = 55) compared to a middle-class sample in a small urban community (n = 197). The difference in the sample sizes was a weakness of this study, as was the difference in response rates: 54% for the small urban center and 32% for inner-city women. The measure of MFA was the Maternal Fetal Attachment Scale (MFAS, Cranley, 1981), and for depression, the Center for Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977). Investigating differences between the groups on each

variable, Lindgren (2003) found that there were no differences in MFA by residence. She did find that MFA contributed differently to health practices in inner-city women compared to women from small urban communities. Inner-city, low-income women who had lower levels of prenatal attachment had significantly poorer prenatal health practices that did those with higher levels of MFA ($t = –3.12$, $p = .003$). There was no such relationship for women residing in the small urban area. Depression was negatively associated with health practices for all women, and there was no difference by residence.

Multiple hierarchical regression was conducted, with prenatal health behavior as the outcome variable. Demographics were entered first, followed by the CES-D, MFAS and site in Step 2, an interaction term of site-by-CES-D for Step 3, and lastly, in Step 4, an interaction term for site-by-MFAS. With the exception of the site by CES-D interaction term, all other variables entered stepwise were significant predictors of prenatal health behaviors, $F(10, 239) = 20.23$, $p < .05$ for the whole equation. This study not only provides some empirical support for the hypothesis that level of MFA may have an impact on a woman's engagement in positive prenatal health practices, it does so in the context of poverty and associated psychosocial variables.

With respect to the findings of the Lindgren (2005) study, Ganz (2000) sought to explain the relationship between behavior and environmental threat through the lens of competing risk theory (see Dow, Philipson, & Sala-i-Martin, 1999), an economic theory which suggests that the competing yet related stressors from living in a low-income community with few resources may be a barrier to engaging in positive health practices. If these stressors are present, pregnant women in such communities may perceive negative health behaviors (e.g., smoking, substance and alcohol use, poor self-care and

nutrition) as a less pressing and immediate threat than the survival needs, violence, and poverty-related stressors they face. The field of traumatology provides an alternate, but related perspective with respect to the Alhusen (2011) study. The violence and stress of low-income inner-city communities, along with the greater likelihood of multiple trauma exposure, can foster clinical symptoms (e.g., PTS, depression, affect dysregulation) that prompt ameliorative behaviors in which symptom reduction and affect regulation become the priority (Ouimette et al., 2003). In this study, women exposed to current IPV had lower MFA, worse emotional health, and poorer prenatal health behavior.

Summary and Study Objectives

The impetus for this qualitative study was twofold. First, the prior literature provides evidence for the sensitivity of pregnancy to both internal and external influences, including a mother's own psychosocial history and her current behavior. Fetal health and development is extremely reactive to and dependent on these factors and outcomes for infants can vary tremendously as a function of the prenatal environment. As Dunkel-Schetter and Tanner (2012), Thomson (2007), and A. D. Weinstein (2016) state, pregnancy is a window of opportunity to untangle and assess the impact of past adverse experiences, chronic stressors, and mental health problems on maternal and infant health. While the benchmarks for threats to healthy pregnancy in higher risk women are possibly more evident and greater than for lower risk women, there are opportunities to not only gauge the likelihood of less than optimal outcomes but to address them. Thus, one of the objectives of this study was to assess, in teens' own words, the meaning and significance of pregnancy in psychosocial context including the nature of the historical and current factors that might affect their health and behavior during pregnancy and their attachment

to their fetus. The study inquired about measures of risk such as threats to prenatal health, cumulative trauma, and external and interpersonal stressors, and protective factors including early stability of attachment, current social support, and aspects of resilience.

The second objective was to follow up on a surprising anecdotal trend observed during early survey data gathering. A consistent pattern of sociodemographic risk, including cumulative ACEs and mental health problems was detected in the survey responses, yet higher than expected MFA and better than expected prenatal health behavior. Responses to the two open-ended questions at the end of the survey revealed that teens viewed their pregnancies as a positive, life-changing event and that they, while acknowledging the context of severe and cumulative adversity, wanted to better themselves and take care of themselves for their infants' sake and were often reflective and optimistic. These responses mirrored those of pregnant teens in related studies. For example, one teen, upon completing the survey wrote:

> A lot of negative things has happened in my life. I didn't always make the right decisions growing up. But for me I can say that this pregnancy has really been a blessing. Before I got pregnant I smoked marijuana and cigarettes. I always wanted to quit and better my life and this baby girl was exactly what I needed to do so. I guess I felt like I never had a reason and my environment never made it easier but the love I have for this child gave me the will power I needed.

These responses led us to our second objective of the current investigation, which was to provide support for similar studies but take the analysis one step further: to shed light on what factors, intrinsic and extrinsic, may have fostered the emergence of their positive perspectives, a finding which can have implications for practice and policy. Chapter 3 presents the methodological underpinnings of and approach to the current study. It will present the strategy employed to developing a grounded theory of factors supporting teens' perspectives on pregnancy as a watershed event.

Chapter 3: Methodology

Nature of the Qualitative Inquiry

Themes emerging early in data gathering (Boyatzis, 1998) and consequently preliminary anecdotal codes (Charmaz, 2014; Miles, Huberman, & Saldaña, 2014; Saldaña, 2014) reflected outcomes from prior studies that focused on the prevalence of cumulative adversity and violence in the life histories of pregnant teens (e.g., see Covington et al., 2001; Kennedy, 2006; Koniak-Griffin & Lenursesser, 1996; S. L. Martin, Clark et al., 1999; Quinlivan & Evans, 2001; Renker, 2002; Weimann et al., 2000), yet also their resilient beliefs, support systems, and positive outlook on their pregnancies (Aparicio et al., 2015; Breen & McLean, 2010; Pryce & Samuels, 2009; Shanok & Miller, 2007). Many of the young women in this study were also compromised from early life by exposure to entrenched poverty, residential instability, and multi-level violence, abuse, and loss and a lack of social capital on multiple levels. The purpose of this investigation was to inductively discover and develop a grounded theory of the factors which may, from an emic perspective, explain pregnant teens' positive perspective on their pregnancies, their unborn infants and their future as parents in the context of cumulative adversity. The study aims to explore and expand on findings from related investigations of pregnant teens' feelings and behaviors—that they are driven, perhaps more so than older pregnant higher-risk women, to create better lives because of their pregnancies, which they often see as a portal for positive change, and support these pregnancies through better health and prenatal care. Specific research questions are:

1. Why are teens exposed to cumulative adversity so optimistic about pregnancy and motherhood, experiencing considerable change in perspective and behavior?
2. What developmental factors (level of stability, attachment, trauma) affect these perceptions and behaviors?
3. What current factors (relationship and family support, mental health challenges) affect these perceptions and behaviors?

In December 2014, with the approval of all involved Institutional Review Boards (see Appendix A), a set of additional open-ended questions was added to the initial quantitative study, in that qualitative data could conceivably capture and expand the depth and breadth of our knowledge of teens' lived experience. The existing qualitative literature on teens' feelings about pregnancy, trends in the survey data, and themes which emerged in the two initial open-ended questions prompt exploration of the following domains and their impact on the experience of pregnancy:

1) Developmental factors, stability/instability
2) Attachment relationships, security/insecurity
3) Exposure to interpersonal trauma
4) Perception of pregnancy and prenatal health
5) Mental health challenges
6) Help-seeking and relationships with helping professionals
7) Future outlook and plans

Theoretical Considerations for Developing Grounded Theory

The study aimed to adhere to the initial principles espoused by Glazer and Strauss (1967) in that theory development is approached as data driven, emergent, and inductively derived, but from within a constructivist framework. Strauss and Corbin (1998) and then Corbin and Strauss (2008, 2015) departed epistemologically from Glaser and Strauss' (1967) original tenet that theories emerging from data can stand outside a researcher's view; this departure exemplified a backlash against grounded theory's prior and increasingly positivist bent (Charmaz, 2014; Clarke & Friese, 2007; Mills, Bonner, & Francis, 2008). A major consideration of this study is the co-construction created by the interviewer's social location and presence, and a participant's perception of that presence. These two factors together can create a specific and individualized "third" factor, extending from the particular combination of each interviewer and participant, similar to the clinical concept elucidated by Ogden (1994), or in the discourse surrounding qualitative inquiry, a construction (Charmaz, 2014; Clarke & Friese, 2007). As Star (2007) notes, codes in a way extend from this third, or holding space between the qualitative researcher and the subject of research, to be later enriched and expanded upon by theoretical sampling.

Given the rather striking differences between these young women and ourselves, as white, middle class women loosely connected to their nurses and the services they were receiving about the very issues inquired about, I realized it was ultimately necessary to adopt a constructivist stance at all phases of data gathering, coding, and theory development. This was borne out in observations recorded during interviewing, in memoing, and during coding. Our position and privilege necessitate reflexivity (Lincoln

& Guba, 1985; Padgett, 2008), an examination of how our emotional reaction to the interview and our participants' reactions to us shaped our interviewing as well as our coding and analysis (Charmaz, 2014; Charmaz, & Belgrave, 2012; Saldaña, 2014). I chose to not only acknowledge these factors but to attempt to shed light on them through close attention to our observations and through memoing, starting early in the data gathering. Kennedy (2005) and Sword (1999, 2003) speak to the issue of "difference" and both reject and attempt to militate against exploitive, or positivist notions of inquiry, where researchers are detached from their participants and their context. Much of the content of observation sheets and memos in the data-gathering phase also reflected my recognition of the disparity between myself and the other interviewers and these young women, and of issues of privilege. Sword (1999) terms this an "inescapable position of power"; stated another way, Lempert (2007) describes the "fundamental power imbalance" that exists between ourselves and our research participants. Members of the team were mindful to avoid embodying this disparity or conveying any sense of hopelessness about the scenarios in which teens found themselves (Sword, 1999).

The research team consisted of the Principal Investigator (JA), the co-investigator, who is the current author (NAP), and two master of social work research assistants; about two-thirds of the interviews were conducted by the current author. We presented ourselves, first, as advocates for pregnant teens, second, as trusted by their visiting nurse to obtain valued information from them, and third, as committed to ensuring that their words were preserved and presented in a way that would help those working with them to understand more about them and what they needed to thrive as parents (Kennedy, 2005).

In this way, we were called upon to convey our desire to help without an explicit promise of help (Miles et al., 2014).

As interviews progressed I became aware of an increasing experience of "surprise" in the data that was emerging, and the importance of monitoring the influence of pre-conceived notions and sensitizing concepts from the literature on my ability to be open and think creatively about the emerging data and its subtle meaning (Charmaz, 2014; Star, 2007; Corbin & Strauss, 2015). Boyatsis (1998), acknowledging that qualitative research is inherently subjective, cautions against another form of bias: projection onto our participants, or onto our emerging data of something—a quality or feature that is either our own, the result of a bias or prejudice, or of prior knowledge and experience that can skew our interactions with participants, our data gathering, our recognition of emerging themes, our coding, and our analysis on a more theoretical level. Given the negative slant to the social constructions and images of pregnant teens, their inner worlds, and their motives, as Barcelos and Gubrium (2014), Breheny and Stephens (2007) and D. M. Kelly (1996) point out, qualitative researchers must be particularly aware of the influence of these discourses when "motherhood" and "adolescence" are concurrently explored. This author's views on teens as mothers-to-be was notably altered as a result of engaging in this inquiry.

Paradigm for Theoretical Sampling

We approached data gathering through interviewing, an interactional space which provided a basis for both co-constructing and extracting meaning through multiple levels of communication, verbal and non-verbal (Charmaz, 2014). It also provides an opportunity to deepen knowledge about a specific phenomenon, and to explore the

relevance of an emerging theory. I attempted to enrich our data collection and the emerging themes by returning to the interview guide as a flexible tool to be utilized to expand on interesting and unexpected information (Corbin & Strauss, 2015; Miles et al., 2014). This guide (See Appendix B) provided the scaffolding for our interaction with teens who volunteered, but we approached it with a flexible stance to determine whether questions were forcing the data, were ordered in a way that did not facilitate the interview, or would prevent the analysis from expanding on an emerging theme. This approach also allowed us to alter the pace as needed and to expand on and pursue interesting or unexpected trends that began to emerge.

Given that the structure of the study had been established, interviewers were not able to pursue theoretical sampling by returning to the field to re-interview participants especially since many teens gave birth soon after they were interviewed. I followed Corbin and Strauss (2008; 2015) who specifically addressed the issue of theoretical sampling when, as in the present study, there is limited opportunity for returning to the field for additional exploration of emerging concepts. First, they suggested using concepts that begin to crystalize during ongoing data collection to pursue in subsequent interviews. Second, they suggest that as themes emerge, to return to data already obtained and view these data in light of these themes. To allow for the data to possess the iterative quality that is emblematic of grounded theory research, I worked backward to re-sample existing data as well as forward to pursue new evidential directions (Miles et al., 2014). The data began to take on a more nuanced meaning and themes were expanded and enriched over the study course (Bryant & Charmaz, 2007; Corbin & Strauss, 2015).

Study Sample

Population to be studied. This sample of teens was drawn from the general population of women served by the NFP-NYC. This study was conducted during Phase I of the NFP intervention. Permission to conduct this study within the auspices of the NFP-NYC was obtained from the New York University Committee for Activities Involving Human Subjects (UCAIHS), by the reviewers at the Nurse-Family Partnership headquarters in Denver, Colorado, and at the City of New York Department of Health and Mental Health (DOHMH) IRB (see Appendix A). This study was not exempt because it involves a protected group (i.e., underage, pregnant). The potential benefits of this study outweighed its minimal risk, and any potential harms were minimized. As of early 2014, the NFP maintained a presence in 49 states. In New York City, the NFP has operated under the auspices of the NYC DOHMH since 2003 and staffs 11 sites throughout the five boroughs. The greater NYC-NFP serves approximately 1,900 families. The NFP recruits interested women up to 28 weeks of pregnancy, and nurses maintain contact with families until children are 2 years of age. Its Targeted Citywide Initiative (TCI) reaches out to the most vulnerable first-time mothers throughout the city, which includes teens who have been in foster care. The teens ranged in age from 15-19, with an average age of 17. Most (65%) were in high school. The teens self-reported their ethnicity and the sample was predominantly Hispanic (52%) and non-Hispanic Black (39%). Most teens resided at home (39%), 26% lived with a foster family, and 17% in a group home or shelter. About 57% of teens were currently or had been in foster care. Only two teens were working, due to school, and 26% were looking for work. Table 3.2 presents the demographic characteristics of the 23 teens.

Table 3.2

Sample Description of Pregnant Teens in NFP

Variable	Measure	N, %
Race/Ethnicity	Hispanic	12 (52%)
	Non-Hispanic Black	9 (39%)
	Other	2 (9%)
Age	15	2 (9%)
	16	1 (4%)
	17	10 (43%)
	18	3 (13%)
	19	7 (30%)
	Average age 17	
Currently living	Foster home	6 (26%)
	With others at home	9 (39%)
	Group home or shelter	4 (17%)
	With partner/sister	4 (17%)
Educational status	Enrolled in middle or high school	15 (65%)
	Completed high school or GED	4 (17%)
	Did not complete high school/GED	3 (13%)
	Enrolled in college or vocational school	1 (4%)
Currently working	Yes	2 (9%)
	No, due to school	7 (30%)
	No, but looking for a job	6 (26%)
	No	8 (35%)
# of NFP nurse visits	0 to 5 visits	12 (52%)
	6+ visits	11 (48%)
Foster care	Never in foster care	12 (52%)
	Yes, in foster care now	10 (43%)
	Not now, but in the past	1 (4%)

Service Sites

In collaboration with the director of the NFP-NYC, permission was granted to interview teens from four service delivery sites that served the largest number of teens within the NFP-NYC umbrella, and two additional sites were added in Winter 2016. Twenty-three teens were recruited for the interview. These sites and the number of interviews conducted at each are outlined below:

Table 3.1

NFP-NYC Recruitment Sites

NFP-NYC Site	Interview
Targeted Citywide Initiative (TCI)	7
Jamaica (Eastern Queens)	0
Visiting Nurse Service (All Bronx)	12
Public Health Solutions (Central Queens)	2
SCO Family of Services (Brooklyn)	1
Richmond Homes (Staten Island)	1
Total	23

Recruitment Process

The recruitment process began with the research team meeting with nurse managers, supervisors, and nurses themselves at each study site to inform them about the study and to stress the need to refrain from direct participation. Recruitment for the study was as passive as possible. The study was advertised within each agency by posting a flyer (see Appendix C) and leaving copies at each site. Nurses were asked to bring these flyers to distribute to teens at regularly scheduled home visits. It was up to the teen herself to contact a member of the research team (the co-investigator) on a dedicated mobile phone set up specifically for the study. Interested teens texted a message to or called the dedicated cell phone number. Access to this mobile phone was password-protected and available only to research personnel. Only when a teen herself reached out to the research team would contact be initiated to schedule the interview.

Inclusion criteria. Inclusion criteria were (a) pregnant teens who are planning to give birth for the first time (only women pregnant for the first time and planning to keep their babies are served by the agency), (b) were between 15 and 19 years of age, (c) were less than 28 weeks pregnant at the time of recruitment to NFP services, and (d) were planning to keep and rear their infant. The rationale for a lower end limitation of 15 is

twofold. First, teens pregnant at very early ages (i.e., < 15 years of age) are often current victims of sexual abuse and are at a different stage of development than are teens 15 years of age or older (Klein, 2005). Second, teens who become pregnant at younger ages are few and are unlikely, in the long run, to be able to retain custody of their infants. Third, pregnant teens younger than age 15 have considerably more problems with their prenatal health and more pregnancy complications than do teens 15 years of age and older. As for the upper end age limitation, New York City defines a pregnant teen as one who will give birth before age 20; in addition, the upper limit of age 19 during pregnancy is consistent with prior research on teen pregnancy. There was no restriction on enrollment in the study by race, ethnicity, national origin, or marital status. Data collection was in English. The only other exclusion is current psychotic disorder as perceived by referring nurses.

Consent process. The consent forms developed for this study were given to all teens interested in participating, are attached (see Appendix D). Two paper copies of this form were brought to each scheduled interview. The consent form was presented to each teen at the time of the interview. The interviewer began by reading the consent form to the teen (which has a separate section for obtaining consent for audiotaping the responses to the qualitative questions), after which she would sign if she gave consent. Only if the teen consented to participate in the study would data gathering begin.

Waiver of parental consent. A waiver of the requirement to obtain consent from a parent or guardian for a teen to participate in the study was granted by the New York University UCAIHS, by the reviewers at the Nurse-Family Partnership headquarters in Denver, Colorado, and by reviewers at the City of New York DOHMH IRB. The request

for the waiver reflected several features of the study and its population. It was justified in this case for several reasons:

- Teens who are pregnant and plan to bear and rear their infants may not live with their parents or may not have a parent or guardian available when the interview is being conducted. Pregnant teens constituted 40% of the NYC-NFP population served and requiring parental permission could substantially interfere with the study's recruitment goal.
- Requiring parental permission may have resulted in a biased representation of the potential study population and could exacerbate the under-representation of at-risk minorities in consented research and compromise the validity of the data.

The waiver is justified under 45 CFR §46.116(d) (USDHHS, 2009), which stipulates that a waiver may be obtained under certain conditions in non-FDA-regulated research. These conditions are met in the present study:

- The research involves no more than minimal risk of harm to the subjects
- The waiver will not adversely affect the rights and welfare of the subjects
- The research could not practicably be carried out without the waiver

In addition, although the teens involved in this study were in some cases minors, they were also "parents to be" who were receiving prenatal care. Some states, including New York State, have laws that authorize pregnant minors to consent to reproductive health care (Dailard & Richardson, 2005).

Data Collection

Data collection procedures. All information obtained from participants in this study was kept confidential, in accordance with the requirements of the NYU UCAIHS.

This study required on-site data collection from each pregnant teen in the study. Specific protocols were designed with NFP to address issues of safety, and if and when teens exhibited psychological distress during the interview. I conducted most of the interviews and trained the two additional interviewers who met established criteria (i.e., completed the Collaborative Institutional Training Initiative Human Subjects Research course in the past five years as well as Mandated Reporter training). Interviews began in December 2014 and ended on August 31, 2016.

The interview process. A digital tape recorder (Olympus digital voice recorder WS-822) was used for the interview. If a teen gave signed consent to be interviewed, she was told that the interview would be an opportunity for her to "speak more openly about things that have happened to her and what is going on currently in her life." Only one teen did not consent to be recorded but allowed her answers to be written by the interviewer. The interview took 45-60 minutes, and a de minimus payment of $50 in cash was provided to each participant at completion. Despite the sensitive nature of the questions, there were no adverse reactions or incidents. Studies conducted with adult women (Decker, Naugle, Carter-Visscher, Bell & Siefert, 2011, Griffin Ransack, & Waldrop 2003) and with teens (Langhinrichsen-Rohling, Arata, O'Brien, Bowers, & Klibert, 2006) found that few women report feeling distressed when discussing past trauma, and most find it psychologically validating.

All consenting teens were interviewed once. Interviews consisted of open-ended questions designed to facilitate the inductive process of theory development. To avoid systematizing or limiting the richness of the data obtained by conforming to a structured interview guide, questions were followed with probes designed to expand on teens' initial

responses (Corbin & Strauss, 2015). In addition to the interview itself and to locate the interaction with the teen situationally (Clarke & Freise, 2007), interviewers also recorded their observations on an observer log (See Appendix E) immediately after each interview. Field notes included characteristics of the teen and the interview setting not perceptible from the recording. These included the "felt sense" of the interview, the teens' general demeanor, relatedness and body language, the physical surroundings, both home and location and observations about these surroundings, the presence of additional advocacy (i.e., if the teen was or had been in foster care, her nurse was present for the consent signing as per the protocol), and the process of getting to and setting up the interview.

Data Management and Confidentiality

The study PI monitored data protection and any reported adverse events on a quarterly basis once data collection began. General data protections and how survey and interview data were secured as follows:

- Respondents were given case numbers through a random number generator and no identifying information was recorded except on the consent form. Case numbers were used to identify the responses of each participant.
- Signed consent forms from teens and the list connecting the names on the consent forms corresponding to the code numbers were stored in a different location from the paper data files in a locked file cabinet in the PI's office. Only the research team had access to this file cabinet.
- Deidentified interview responses were uploaded into a password-protected Dropbox from the digital recorder by USB port and then emailed with only a subject identification, site, date, and interviewer initials to a vetted

transcriptionist, who was provided with a format for verbatim interview transcription. The transcriptionist then emailed the completed interview transcripts back to the co-investigator who uploaded it to the password-protected google site accessible only to those involved in the study.

- All interview data were entered into the Qualitative Data Analysis (QDA) software Atlas.ti (Muhr, 1997) for analysis; coding and conceptual development. Observations recorded during data collection and memos were also coded for the purpose of triangulating with the recorded data.

All data including consent forms were stored as noted above for a period of three years following the completion of data collection. Three years after completion, all signed forms or other identifiable information from the study will be shredded. De-identified data may be retained for a longer period if analysis for publication is ongoing or in case published findings are questioned, but deidentified paper copies are kept in a locked file drawer and electronic data was stored in password-protected computer accounts.

Data Analysis

Data gathering and analysis for this qualitative study was inductive and exemplified a grounded theory methodology, and involved an iterative process of moving back and forth between acquiring data and concurrent analysis. A data management log was used to track decisions made during analysis. Data were coded utilizing the following methodology, similar to that described by Kennedy et al. (2010), and Whitley and Kirmayer (2008).

Methods of Data Analysis

Preliminary identification of themes began early in the process of data collection. Interview recordings were carefully reviewed and annotated within two days of the interview for emotional content, emphasis, and tone, and then a second time while reviewing transcriptions to fill in missing data and ensure that the data transcribed was verbatim and represented the "feel" of the interview.

Initial data condensation. Initial data condensation consisted of first and second cycle coding (Miles et al., 2014; Saldaña, 2014), termed initial and focused coding by Charmaz (2014) and Saldaña (2014). The co-investigator and principal investigator conducted first cycle coding of three transcribed interviews by hand, using line by line in-vivo coding. In vivo coding was used to start the coding process, but moreover to give voice to a historically voiceless group. If we look at pregnant teens as a "case" as described by Miles et al. (2014), a group that has been traditionally silenced and stigmatized and wish to avoid reinforcing the position that they are fundamentally and unequivocally problematic (Barcelos & Gubrium, 2014; Freed & SmithBattle, 2016; Howard, Carothers, Smith & Akai, 2007; SmithBattle, 2009; Wilson & Huntington,

2006), we aim to capture their exact words and phrasing. This initial exploration of hand coding suggested that the method was feasible.

Atlas.ti was utilized at each stage of coding. During initial, first cycle coding, it was used specifically to abet the process of staying close to the data, to preserve the meaning in teens' quotes that supported emerging codes. First cycle coding consisted of simultaneous line-by-line in-vivo and process codes (Miles et al., 2014; Saldaña, 2014). In this case, I chose to code through a process of "splitting" rather than "lumping" (see Saldaña, 2014), to facilitate coding as close to the data as possible to ensure that I did not attach or project our preconceptions to these data, and that I captured the teens' words and phrasing and allowed codes and themes to emerge inductively from what they have said. Passages of data were coded wherever possible for process, or gerunds to discover the "how" and why" of the "what" (Charmaz, 2014; Miles et al., 2014; Saldaña, 2014). These codes formed the basis for higher order themes in second cycle, or focused coding, where I identified codes that appeared with greater regularity in the data, or, turned out to be "super" codes (Charmaz, 2014; Friese, 2008). Here, coded data were categorized according to their conceptual similarity and theoretical importance and viewed within a code tree, or hierarchy. Codes that were not well grounded or thinly supported by data were eventually merged with other codes to become part of a richer theme, dropped from the list, or, in some cases, became interesting outliers or negative codes to be explored further (Friese, 2008; Padgett, 2008).

Emerging themes. There were clear themes that emerged from the data that were strengthened through repeated rounds of constant comparison of codes to emerging data from subsequent interviews, codes to interview context using network functions of

Atlas.ti, and codes to other codes to ensure that codes captured the quotes that best validated them. For example, a theme that began to emerge early in the data involved the quality of teens' early attachment relationships, both negative and positive. There were many quotes which exemplified teens' negative relationships with their fathers such as fathers being frightening, alcoholic, or leaving the family. They also discussed missing their fathers and wishing for better communication with and from them, revealing a sense of "father hunger" as described by Herzog (2013). All thematically similar codes for "negative relationship with father" and the relations between these codes were organized into a hierarchy, or code tree, Codes that emerged included "Frightening father—mean, violent, alcoholic" and "Dad left us, had another family."

The Network function of Atlas.ti was used to view quotes that supported a particular code in the context of the interview, to ensure that it was a "valid" representation of that code. This required a complete immersion in the data—involving close reading of context, refining codes, and returning to the data for re-reading. This became a method of sampling the data theoretically, allowing for constant comparison of emerging codes with previously collected data, and new data with existing codes, thereby refining codes. This method of comparing codes and emerging themes to data to refine them is essential to the process of developing grounded theory as it provides the basis for developing concepts fully and differentiating them from one another (Glaser, 2001; Glaser & Strauss, 1967; Corbin & Strauss, 2015). The process of reading and re-reading the quotes helped us distinguish similar concepts. For example, after using the Network function of Atlas.ti, reviewing all quotes supporting a code, and revisiting it again in the context of the interview, helped ensure that we understood the underlying meaning. The

code “Be a role model, raise your kid right” was merged with “What I wish for my child going forward” and renamed, “Be a role model, raise your kid right to ensure their future.” During focused coding, it became clear that optimism played a role here and this code was elevated to the more conceptual, “Affirming Parenting Optimism: I Can Be a Role Model”. An extensive merge record was developed to track these merges by exporting every one of these decisions into a text output file which included the codes, how they were condensed, and the supporting quotes. Commentary about the reasoning behind each merge was also kept in this record in the form of comments attached to the merge record. The record kept pace with each of these decisions and included all the supporting quotes. Appendix F provides a sample of a merge.

Data Saturation

For the qualitative study, recruitment was slated to continue within this sample until emerging categories reached saturation. The criteria used for determining that “enough” data was collected to support a rich emergent theory has been a subject of debate (Bowen, 2008; Charmaz, 2014; Glaser, 2001; Stern, 2007). One benchmark for ceasing data collection might be when a researcher learns “nothing new” from additional interviews (Stern, 2007). In the present study, simultaneous data collection and coding, which involved continuously returning to the data to compare new codes and emerging themes to new interview data revealed that no new themes were emerging after about 18 interviews. There were several very well-grounded themes, including teens’ experiences of interpersonal trauma and loss, disrupted attachment with their own mothers, mental health problems, view of pregnancy as a positive event initiating a new healthier trajectory, and a desire for permanent housing.

Saturation does not occur by simply observing a pattern of "no new data," or repetition of quotes or events, but when *theoretical* sampling has been exhausted. In other words, as Bowen (2008), Bryant and Charmaz (2007), and Glaser (2001) note, looking at emergent themes theoretically would address the question of whether *patterns* of relationships between emerging themes and categories yield anything new, such that all patterns in the data have been accounted for. If possible, grounded theorists should pursue data collection until a category is saturated with respect to its relationship with other categories; in other words, saturation is an "elastic" property of grounded theory studies.

Sample size is of consideration (a common standard for grounded theory studies is around 25-30 interviews for a smaller scale project), as is the quality of the analysis (Bowen, 2008; Charmaz, 2014; Sandelowski, 1986). While the goal of attaining data saturation should determine sampling adequacy in a grounded theory study, our barrier to further recruitment and pursuing data saturation was offset by two approaches. First, if a teen presented a new concept during an interview, we would probe to flesh it out and would ask teens in ensuing interviews to expand on this concept to discern if it was a theme. For example, we noticed that some teens, although not many, felt that helping professionals of any type could not really be counted on, so we inquired about this with subsequent interviews. We found that this theme was only thinly supported by emerging data in this group of teens, a finding that made sense since they opted to enter into a helping relationship with NFP. Second, I adhered to the tenets of Corbin and Strauss (2015) and Miles et al. (2014) used data matrices and displays (see Kennedy et al., 2010; Friese, 2014; Miles et al., 2014) during analysis to relate themes to other themes to develop previously unseen relationships between themes. I chose to utilize these matrices

to allow for querying the data to discern patterns, to help determine "who said what and under what conditions" with respect to feelings about pregnancy and prenatal health. The number of times a teen's quote received a code was not counted, but rather *whether* it was coded at all during their interview to avoid skewing the data if a teen happened to be more talkative (Padgett, 2008).

Final Phase of Analysis: Selective Coding

In our final phase of analysis, selective, or axial coding provided the foundation for a final querying of relationships between codes, and allowed for exploration of differences between two emerging groups—teens who experienced multiple ACEs and regarded their pregnancies to be a positive and transformative experience spurring new beliefs and healthier behavior, and those that had considerably less ACE exposure but also espoused relatively, but not as intensely positive views and beliefs. I utilized several functions of Altas.ti to understand the meaning of teens' responses and began to develop a sense of factors that may have contributed to the emergence of core themes and the relationship between these themes. To approach the final conceptual model, I first utilized the code-cooccurrence function of Atlas.ti to determine what other statements emerged spontaneously when teens spoke about their pregnancies. The code that emerged when teens spoke positively about the value of their pregnancies, prenatal health, and attachment to the fetus was "Mom wasn't a mother figure". Although I took note of this, code cooccurrence had the limitation of precluding exploration of response patterns across and between interviews. For this I again used a data matrix formed by a data transfer from the codes-by-primary documents table function of Atlas.ti, where any or all

codes could form one axis of a table (the Y axis in this case) and each teens' interview could form the X axis.

By exporting this function to Excel, I created a matrix of subcodes by each participant to discern specific response patterns within and across interviews, differences between subgroups of teens, and how codes and eventually themes related to each other. By doing this, a more elaborate analysis of each theme's properties could be conducted to explore patterns within and across participants with respect to views of pregnancy and the relationship of this central theme to others. Lastly, after reducing the codes to their essence, I created a matrix with supercodes by participant which helped us to ascertain connections between them by looking for patterns within these spreadsheets (Friese, 2014; Kennedy et al., 2010, Miles et al., 2014). This final phase assisted with axial coding, where I constructed a cohesive "storyline" of the data, and the core category around which theory emerged (Boyatsis, 1998; Strauss & Corbin, 1990).

Strategies for Rigor

The question of what makes a valid, credible qualitative study has been the subject of considerable debate, and has been addressed by Caelli, Ray, & Mill (2003), Creswell and Miller (2000), Glaser and Strauss (1967), Lincoln and Guba (1985), Padgett (2008), Sandelowski and Barroso (2002), Shenton (2004), and others. There are inherent barriers to trustworthiness in an approach to inquiry where researcher subjectivity is an integral part of data collection and analysis, and where possible biases, researcher and participant-based, must be tracked and noted. Miles et al. (2014) and Weston et al. (2001) observed that shared interpretation can enhance understanding of the phenomenon under study, as well as validate emerging codes. This process also helps to promote an

acceptable degree of intercoder agreement. Three interviews were hand-coded independently by myself and the principal investigator (JA) to identify any systematic inconsistencies. Discrepancies in coding between researchers were settled by reaching consensus, where each discrepancy was addressed through discussion until 85% agreement was reached between two raters (Miles et al., 2014). Because so much of this data was gathered by two researchers (NAP and MM) and analyzed by two others (NAP and JA), and given the limitations of this study paradigm, I introduced as many aspects of rigor as possible.

To heed the call for greater methodological transparency, strategies for rigor in qualitative research must be built into the study as it is conducted (Bowen, 2008; Padgett, 2008). This study's constructivist stance was reflected in the means utilized to promote greater validity, to ensure that it captured the constructions of our participants in their interactions with the research teen in as unbiased and authentic manner (Creswell & Miller, 2000). Sandelowski (1986) proposed four strategies for rigor in qualitative studies—credibility, fittingness, auditability, and confirmability. Padgett (2008) recommends six strategies: prolonged engagement, peer debriefing, member checking, triangulation, auditing, and negative case analysis.

In the current study, I ensured triangulation, auditability, fittingness, negative case analysis to assess for disconfirming evidence as recommended by Creswell and Miller (2000) and Shenton (2004) and reflexivity. I relied on two forms of triangulation—data triangulation, and theory triangulation (Bowen, 2008; Lincoln & Guba, 1985; Padgett, 2008; Sandelowski, 1986). First, with respect to *data triangulation*, I triangulated data by coding both interviews and observations, the latter of which can add a concrete measure

of environmental stress that teens did not discuss spontaneously. Miles et al. (2014) warn against relying on one form of data, particularly to militate against biases stemming from the site, or in this case the study, on researchers. During interviews, we were collecting more than one form of data by observing and recording the relational (e.g., body language, degree of relatedness, expressiveness, guardedness of the teen interviewee) and physical aspects (e.g., home environment, nature of the immediate community, level of family resources, level of danger) for each interview. The observations can be used to provide validation for the themes emerging from interviews. *Theory triangulation* was introduced during our analysis. This measure of triangulation was introduced as a means of understanding the harbingers of resilience that began to emerge during our data analysis. While I was not surprised to find that teens had experienced a high degree of cumulative adversity, I triangulated both CAD and resilience theories in the analysis with respect to the organization of themes to produce a final conceptual model of influence.

Auditability was the second strategy, and was possibly the study's strongest form of rigor. The use of specific functions of Atlas.ti (i.e., Comment and Merge) allowed for a detailed trail of every decision to develop or enriched a code with emerging data by merging it with other codes throughout this process, with a description of the reasoning behind these decisions. Observational (commentary level) and research (analytic) memos were kept throughout the process of data gathering and analysis to provide a conceptual scaffolding for these decisions. Third, *fittingness* was approached by the constant return to data, to act, as Sandelowski (1986) described, as one's own devil's advocate to ensure that findings fit the data it was induced from, and to look for negative cases to disprove our emerging theory.

Creswell, Hanson, Clark Plano, and Morales (2007) espoused the advantages of prolonged engagement with participants, particularly to establish rapport over time, increase interviewees' trust of the researcher(s), and enhance the credibility, or validity of emerging data by assessing whether our account of this data reflects participants' reality as they know it. While one of the limitations of this study (i.e., conducting single interviews) precluded prolonged engagement, we were able to develop greater familiarity with our participants than a one-time interview would usually allow for two reasons. First, we were introduced, sometimes in person, by a teens' NFP nurse with whom she was familiar and in many cases, had an ongoing relationship. Second, we did not launch directly into these interviews. A survey preceded the qualitative questions, and assessed the same topics we inquired about. This created a space for discussion and questions prior to the interview and enhanced our ability to show interest, connection and empathy to teens. When we began the interview, the ice, in most cases, had been broken.

As Bryant and Charmaz (2007), Caelli et al. (2003); Charmaz (2014), Glazer (1978), Corbin and Strauss (2015), and Schwandt (1998) remind us, theories are constructions, and the need for self-reflection to separate ourselves as instruments through which theory develops from the data itself is a consistent exercise throughout qualitative inquiry. Throughout the coding process, my own *reflexivity* as a researcher was brought to light by asking several questions, and through memoing, both at the "commentary" as well as the "theoretical" level. For example, how might my own history, or inherent preconceptions from immersion in the quantitative literature shape or force my coding and in what way, or cause me to overlook some theme or relationship in the data? What impact could my "disciplinary socialization" (Caelli et al., 2003, p. 10),

training as a trauma-focused clinician have on how I interpret what I see and hear? What do I as a researcher deem important? (Charmaz, 1990; 2014; Corbin & Strauss, 2015).

Memoing assisted both reflexivity and conceptual development throughout this process. Memos captured impressions gained during data collection, from the earliest phases onward through insights during all phases of coding. This process allowed for an examination of my own role as a research "instrument" in this marginalized group of young women, as well as assisting with higher level conceptual development. Memos at first were mainly categorized as "commentary", observations on the coding process and emerging themes, with a constant return to the interviews themselves and the impressions left by these interviews. Memoing was vital to support immersion in the data, but also to explore the process of engagement with these at times very disturbing stories of abuse and neglect, and to support coding these narratives in a way that preserved teens' meaning. As C. C. Knight (2013) noted in her dissertation research, using qualitative methodology as a gateway for young women to speak about their pregnancies provided rich data, but immersion in hours of listening to their accounts of struggle and worry was emotionally trying. I relied on reflective memoing to process a similar experience.

During interviewing and again while coding, I experienced unanticipated emotions, particularly anger, sadness, compassion, and protectiveness regarding the often extreme attachment disruptions experienced by some of these teens. I engaged in memoing on these emotions and observations, and also, on my enhanced awareness of the disparities in social location between the teens and myself. I also had to maintain a sense of openness and contextual understanding, as Sword (1999) describes while teens spoke about their prior choices, some of which were injurious to them but likely an

outcome of their histories of trauma and emotional distress. I strove to maintain a dual awareness of my emotional processing and the co-constructed reality of the interaction with each teen. During coding, memos became more analytic and reflected on refining themes and relating them to the literature, and finally, more theoretical as pivotal themes and the experiences that supported them became more evident (Charmaz, 2014; Charmaz, & Belgrave, 2012; Corbin & Strauss; 2015; Lempert, 2007).

The Evolving Story

Specific themes began emerging early in the data gathering and coding. These themes reflected the related literature, which is not unusual (Bazely, 2009; Bowen, 2008). Themes included teens' desire to explore and express feelings; initially stable followed by increasingly unstable family environments; alcoholic and unavailable, sometimes violent fathers; cumulative trauma and abuse; closeness to grandmothers, a theme that was mutually exclusive with another: lack of a bond with, and harsh treatment from mothers. Teens provided rich descriptions of their feelings about pregnancy as a turning point motivating positive changes, but also, pregnancy as isolating and distressing. They discussed mental health challenges, a strong desire for housing and financial stability and to continue their education. The unanticipated finding was that many were highly resilient and expressed a desire for autonomy, a need for self-protection, an ability to reflect on the past, and a generally optimistic future outlook.

The core theme that emerged from these data was the centrality and transformative potential of pregnancy, in the context of cumulative adversity. Most teens provided an alternate or competing narrative to the prevailing perception of teen motherhood as a deviant choice leading to unfavorable outcomes (Arai, 2009; Barcelos &

Gubrium, 2014; Breheny & Stephens, 2010; D. M. Kelly, 1996; Rolfe, 2008; SmithBattle, 2009; Ungar, 2004). Our initial observations of the data suggested that these teens were not a homogenous group. Their narratives generally spoke to the potential of adopting a maternal identity as a transformative, trajectory-altering event, but most markedly in the context of lifelong adversity and a present shortfall of resources.

Chapter 4: Results

Organizing Themes

Ten organizing themes emerged during focused coding and became supercodes. These themes were either "content" or "resilience" codes. The content codes emerged in a sense as two sides of a coin: positive and negative tableaux of experiences within life course events and relationships that the study was designed to explore. Teens expressed this at times within the same sentence; for example, Teen #132 expressed both joy and mixed feelings about becoming pregnant, with the quote, "…me being pregnant…bad thing is the best thing in the world. I can't wait. I think I'm gonna cry when I give birth. I'd be like, oh, my God that's *mine*?" In addition, I also noted some "meta codes," or varying indictors of intrapersonal resilience that emerged through many of these interviews. These were statements teens made that indicated resilience beliefs, reflecting findings from the relevant literature. Based on these indicators, I was led to recode the data with these findings in mind. The interpretation of these resilience indicators was not categorical but dynamic, and in interchange with each other and within teens' broader context. This broader context included both cumulative adversity in the form of ACEs and environmental and interpersonal stressors, and protective factors, especially from the teen's family and the FOB. The findings of this study provide support for the manifest construct of resilience as protective in the face of lifelong adversity as well as the positive influence of external protective factors, and provides some evidence for the interplay between accumulating advantage and disadvantage over the life course (Furumoto-Dawson et al., 2007; Hatch, 2005; Nurius et al., 2012; Wickrama Conger et al., 2005).

Figures 3A and 3B depict an amalgam of major life course themes that initially emerged within teens' discourse, including both cumulative risk and cumulative resources, or protective factors. These are not presented as a time-bound or directional trajectory for teens: as Garmezy (1991), Garmezy, Masten, and Tellengen (1984) and Ungar (2004) contend, challenges (cumulative risk), compensatory (neutralizing factors), and protective factors, both intrinsic and extrinsic, fluctuate in degree with changing circumstances. In fact, most teens (80%) who stated that their early lives and were stable and families were "OK" experienced a devolution from this relatively positive state to experience less stability, higher levels of environmental stress, and often cumulative ACEs.

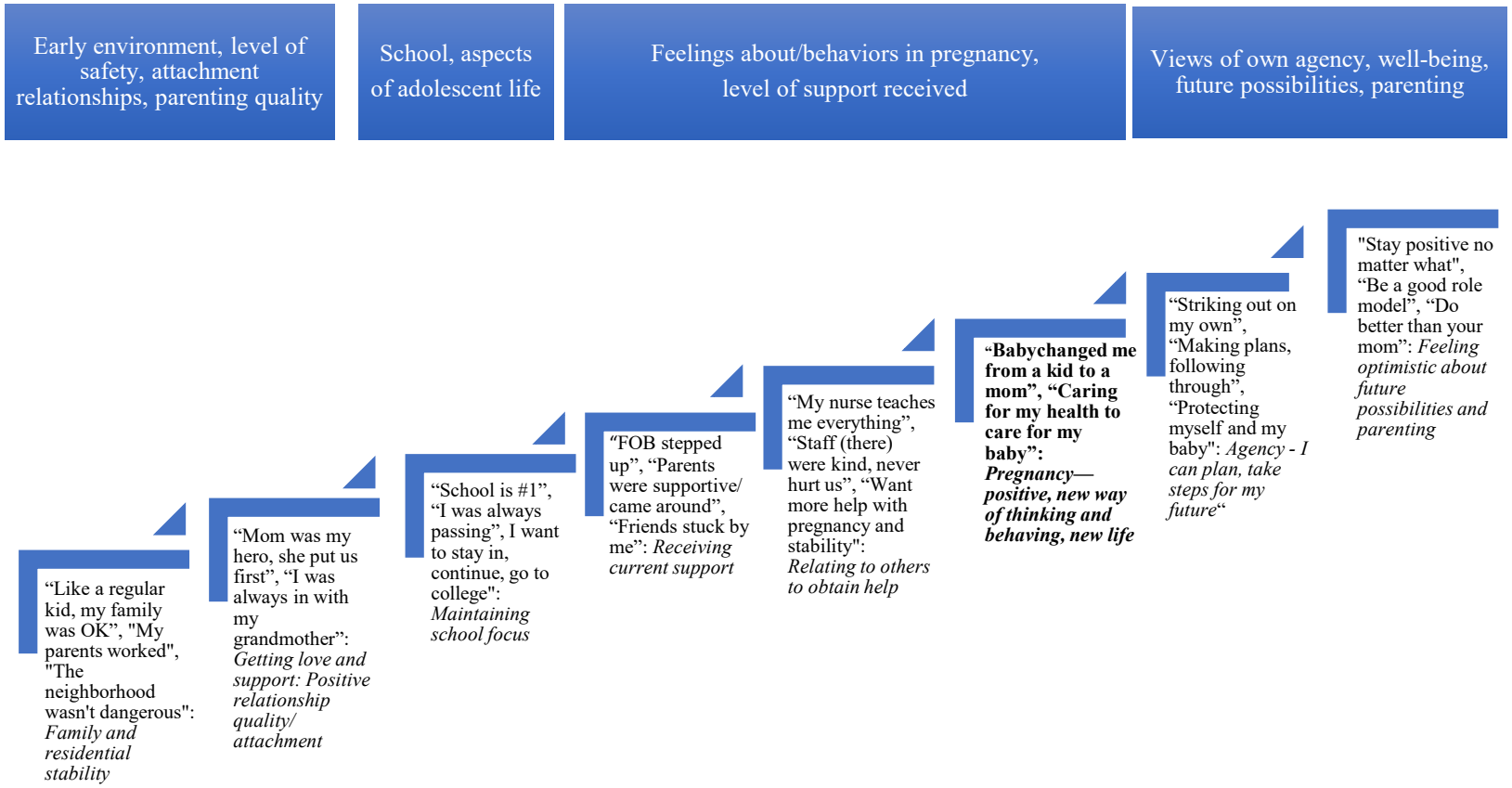

Figure 3A: Emerging Themes: Patterns of Optimism

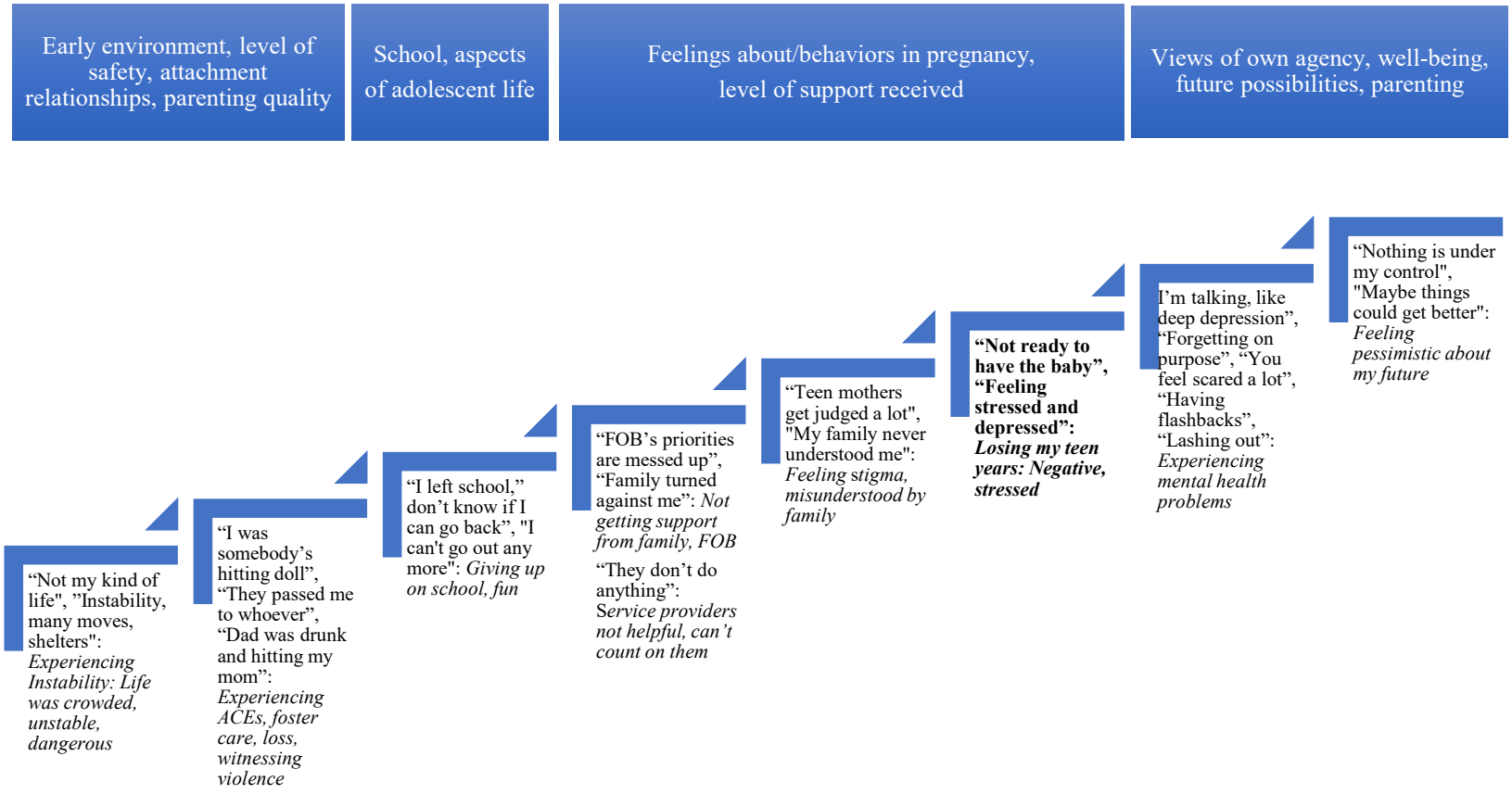

Figure 3B: Emerging Themes: Patterns of Doubt

Final Organization of Themes

Support for the ten themes are presented below with sample data—quotes illustrative of the major themes. Italics are added to emphasize passages which richly exemplify a theme. Teens' responses are organized here to reflect overarching themes, or supercodes in preparation for the final conceptual model exemplifying a grounded theory. These themes reflect both CAD and resilience theories as they capture risks and protective factors over time, according to teens' narratives. Risks included ACEs and attachment deficits, environmental and interpersonal stressors, and mental health problems. Included in protective factors are past and present social support, external environmental resources, and teens' resilient beliefs and behaviors. Teens' views of pregnancy are also represented by supercodes, to which all other themes eventually relate in the final model. Several codes supported each theme. A codebook, with all supercodes, the codes that support them and definitions of these codes, is found in Appendix G. Subcodes included the code itself, and a quote from a teen that exemplified this code well as a means of promoting "shared authority". A visual representation of the "process" of how resilience beliefs may moderate ACEs and influence perceptions of pregnancy and prenatal health and behavior is presented at the conclusion.

Supercode I: Early Stability and Support

With few exceptions, teens described their early lives as somewhat innocuous. Whether or not they recognized the compromised nature of their social location and that of most people they interacted with (Furstenberg, 2007), it was their perception that "things were OK." These external resources included teens' microsystems: their families and immediate neighborhoods, schools, and available resources.

Remembering Normal Life: "Living Like a Regular Kid"

Most teens (82%) made at least one positive comment about their physical or family environment; these included "It was a nice neighborhood," "Nothing bad ever happened to me," or "My parents were always working." Most teens stated they initially experienced a "normal life" at the level of the family and immediate neighborhood. They stated that they didn't see crime, their neighborhood was "OK," they did not experience multiple moves, they lived in nuclear families at first, and that their family life was "OK." Some said that their foster families benefitted them. Following these teens over time, the duality of these experiences became evident—these seemingly unremarkable beginnings, in all but five cases, devolved into loss and violence and disintegrated. Interestingly here, teens did not use terminology indicating their awareness of their poverty. In response to the question, "Can you tell me a bit about your family, about your family life when you were young" Teen #739 reported:

> Um…I lived in an apartment with two bedrooms. I didn't have my own room. I had to sleep in the living room and my two older brothers, had their own room. We would always play fight, as I was little. *Like a regular kid, I guess.*

Teen #487 discussed the overall tone in her family, and stated:

> I grew up in a good environment. Good family. You know, everybody tries to stay positive…around me. I grew up in church. My family is…they're a good family but they just don't take any nonsense, you know. They raised us up to be young women and men and they want to best for us and if they see us lacking, they try to stay on us the best way they can. Yeah.

On the other hand, Teen #168 described the initial security and eventual dissolution of her family, noting both the impact of this and that she had no control over it:

> Int: What was it like growing up? Where were you living, who was there?
> Teen: Well, while I was growing up when I was…Um…I had my mom, my dad, they were married. They were, like, the first 13 years.
> Int: OK. So they lived with you until you were 13.

Teen: Yeah. And then they got separated and then they went their way. Um…for me, I didn't think it, and you know, *maybe it was a really big impact for me because I knew what was going on*. And, you know, my dad has now his life; my mom has her life. But I really don't have nothing to do here. *I mean they're my parents, I know, but I didn't make the decisions.*

"It was a good neighborhood": Some teens described their neighborhoods and early stability; Teen #317 stated that she "lived in Staten Island all her life, and never moved, it was a good neighborhood." Later she was witness to severe physical violence perpetrated by her biological father. Teen #485, who initially reported that she lived in one place, "I lived with my mom dad and brother—they've been married 30 years"—was eventually was removed to a detention center due to acute sibling violence. Teen #739 described this kind of residential stability, but later described a mother who was by turns caring and abusive, and her father who left but remained connected to her:

Int: Now, when you were kid, did you live in the same place most of the time in the same house? Or did your family move?
Teen: No, we moved and I was like six years old.
Int: You moved…where did you move from, to? You were born where?
Teen: I was born in the Bronx and I moved in the Bronx in a different location, next to the shopping area and stuff like that. A whole bunch of transportation so it was more convenient. And ever since then, I lived there for the rest of my childhood and the beginning of my teenage years.
Int: So with you and your brothers and your mom? And your dad would come in and out?
Teen: Yeah.

Being Provided For: "My Parents Always Worked"

About 55% of teens discussed their parents' working life. Most teens spoke of this either in a perfunctory way or with pride, although a few noted that their mothers, mainly, were not available to them because they were working long hours; some qualified this with "they weren't/she wasn't around much." Teen #143, who reported a relatively stable, trauma-free life, stated:

> My parents always worked. They were very hardworking and tough. My mom was a good cook and my dad worked so much. I know now it was for us. They are great, great people.

Teen #527, who ended up moving to a shelter with her mother and siblings after "a domestic violence situation" involving her father, still reported on her parents' steady working life:

> My dad worked…he always had a job. He was working for a limo company, I remember. He used to do construction with the union. And my mom…she always worked at the same place. She works at a shelter. She's a security guard at a shelter. She works at the front desk. She got the job right after we got our apartment after we moved out the domestic violence shelter. And I was in like third grade when she had it…So she's had it for a while.

Supercode II: Early Attachment: Supportive, Loving Relationships

During the interview, we focused on teens' attachment relationships and the quality of these representations by inquiring about the people who were most important to them and why this was so. We also explored prenatal attachment, asking about how they felt about their unborn babies. We observed some notable differences in who teens understood to be attachment figures, and in the quality of attachment representation in three subgroups of teens: Teens in foster care, teens who had experienced trauma but were not removed to care, and teens who reported they did not experienced trauma. A pattern that emerged among teens who had not experienced ACEs or many stressors, and those who experienced some interpersonal trauma but were not in foster care was a more positive view of mothers, and a desire to model after their mothers.

Getting Love and Support from My Mother: "She Puts Me First"

About 40% of teens reported that their mothers loved and cared for them and were good communicators, and that they "took care of business" and "put their kids first." Teens also described how their mothers listened to and communicated with them, and

noted that they provided an example they wished to model. Some considered why it was hard for their mothers to communicate; one teen stated, "My mom she was such a hard worker and I don't think she ever had her mom to talk to her and stuff like that." The same teens stated that their mothers were happy, or became happy for them once they found out about the pregnancies and that communication and support improved with time. The following quote from Teen #497 exemplifies this theme:

Int: So can you tell me about what your relationship with her is like now?
Teen: It's like…*she's my best friend. Yeah*.
Int: Can you say how she is your best friend?
Teen: Um, first because she listens to me. She tries to like be there and, you know, *what mothers do.* She tries to like take care of me, even though she don't have money sometimes. She tries her best. *She goes like, I don't know, she said she'll move mountains for me.*
Int: Hmm. So what's that like for you?
Teen: I love my mom. (emotional)

Teens also described their mothers' ability to communicate, and changes that might have occurred as their mother's lives changed or as the teens themselves grew older and became pregnant. These teens noticed a growing closeness to their mothers and that they communicated with each other more effectively. For example, Teen #621 explained how the pregnancy brought she and her mother closer and enhanced their communication:

Int: Is there anything else you might want to say about her?
Teen: Um…well, when she found out I was pregnant, she was mad. *Of course, like, then she didn't turn her back on me saying you have to leave or then she gave me her, she helped me out throughout the…my emotional feelings, how everything was going.*
Int: Yeah, OK. So you're still close to your mom, at what age do you think you were closest to her?
Teen: I think since I was ten.
Int: And can you tell me how your relationship is…what it's like for you and her now?
Teen: "There's more communication than before. And um…we don't argue."

"Mom took care of business". Teens also discussed how their mothers "took care of business." Quotes that supported this code focused on modeling, strength, and example-setting, "Mom was my hero—she puts her kids first, she's strong, she takes care of business." Teens remarked that they would model themselves after their mothers as caretakers. This code was differentiated from the more emotion-laden codes describing loving, close relationships with mothers; here the focus was on "taking care of business." For example, Teen #557, who noted that her mother could be "dictatorial" and not warm, was nonetheless a good provider and said:

> Int: So what did you learn from her or from other family members about how to be a mom?
> Teen: Your children come first even if it's…well, your children come first when it comes to providing. Be a good provider, that's what I can say. That's the number one thing that I've learned.…Um…*materialistic…materialistic-wise my mom was always very supportive in that way. I always had everything I needed. She wasn't very loving or involved. Or supportive in my other needs as far as someone to talk to or, you know, contain things.*

Teen #527, whose mother also left her father and took her children to a domestic violence shelter when she was about seven years old, noted when asked what she learned from her mother about how to be a mom:

> Teen: Um…well she was always around her kids, like she never left us with anybody else or anything. *So I would need to like stay close to my kids. I want to stay around them and stuff like that.* Make sure they know me growing up.
> Int. Hmm, hmm. So stay close to them. Yeah. And what else?
> Teen: Hmm, what else? I feel like she always put us first and so she…she never like…I never saw her put anybody before us like…no family or not even a relationship or anything. Not even herself. *So she sacrificed a lot for us.*

My Dad/Stepdad Had My Back: "He was Always Supportive/Like My Hero"

Teens' relationships with their fathers and stepfathers were in large part negative. Eight teens (35%) reported that they did have positive interactions with their fathers,

often in the context of having an inadequate bond with their mothers. Several of these described stepfathers; Teen #317, whose biological father was physically abusive of her mother, noted of her stepdad's role in her family, "He's always been that guy…yeah, he's actually very supportive." Four of these teens were currently in supportive relationships with the father of their baby, and the rest were not. Teen #485 had a consistently good relationship with, and image of her father:

> He is like, he's really caring, he's really supportive. He's a *real* people person…We've always been close. I think we've got closer since I grew up. When I…left when I was 13, since I came back, and since I was there we managed to talk a lot and build a stronger bond, but our bond's always been really strong. I've always…he's always the first person I'll come and talk to or if in school if anything was to happen I'd be like, OK, call my dad. Or, if like, I was in the street or anything was to—I would always tell people, call my father. There's no point in calling my mom cause she's just gonna tell my father.

Teen #658 commented on why her stepfather was more like a real father:

> Um…when we needed stuff, like, you know, when we needed food or my mom can't get it, he always can get it and when we needed clothing, washing clothes, you know, just for us to learn, he always give it to us, you know, like that. It was my siblings, my baby siblings' father, their father, and he was very nice to us even though, you know, *there's some fathers that say, you're not my child, I shouldn't have to take care of you. But he never said that.*

My Grandmother Never Hurt Me: "Everything Was About My Grandma"

An orthogonal relationship emerged from the data in response to the question, "Who was the most important person in your life." The teens who expressed having no bond with or an adversarial relationship with their mothers were also those who stated that their grandmothers were most important to them. About 35% of teens focused on the crucial role their grandmothers played and discussed their emotional support, particularly their lack of criticism, and their material support, filling in where parents were unable or unwilling. Teen #650 described the importance of her foster grandmother; she was

removed from her home at age two to begin a six-year stint with a foster family. She noted, “If I got in trouble I ran to grandma. If I was hurt, I ran to grandma. Everything was about my grandma, you know…She was like everything to me like…” Teen #132, passed around to multiple family members, was “discovered” at her nearby school by her maternal grandmother. She remarked:

> So I was at her house every weekend. *And no matter where I lived at, I was trying to make my way to my grandmother’s house. If not, she will find a way to me. That’s how our bond was, you know. It was very strong.* We had our own language. We…I didn’t speak…you know, like I said we didn’t speak the same language, so I would point and she would say, “Yes, I know.” Or I would show her how to say "ice cream" and she’ll show me how to say little words. You know, back and forth. *It was just a special…like she understood me.*

Teen #168, who reported having no bond with a harsh neglecting mother, shelter living, and consistent instability, discussed her grandmother:

Int: Can you tell me about the most important person to you when you were growing up?
Teen: My grandmother.
Int: Can you describe her to me?
Teen: Well, she’s a loving person. She’s always here for me even when I got pregnant, she never turned on me. *She never told me that I was gonna be like my mom. She never hurt my feelings.*
Int. So, what did you learn from your grandmother about how to be a mom?
Teen: You know, no matter what age they are, *they’re always yours and if you can help them, help!*

Feeling Cared for in Foster Care: “Better Than My Real Family”

While most teens described their experiences in foster care to be unequivocally negative, several spontaneously discussed the positive impact of a foster parent and the advantages of being in foster care over their own families. Teen #743, remarking on the interplay between her mother’s behavior and her involvement in foster care, expressed her feelings:

> Oh, yeah. Like if my mother didn't move…I wouldn't be in foster care but on the bright side, like while I'm in foster care, *I gained the support from my foster parent that I didn't get from my parent.* So basically it's like the parent…*like my foster parents cared more about me than my own parent…*

Teen #650, whose story included positive foster care from ages two through eight followed by physical and emotional abuse upon return to her biological mother, related her observations about her loving and supportive foster family:

> All I know is like till the age of eight, I was in a very good foster home with my sister and then we came home in 2003 or 2004 when I was eight. It was really good in the foster home. Like they were like our family and even after foster care we still kept in contact and we had seen them on holidays and stuff like that. So it was like…we basically were their family, you know. And they considered us, still to this day I'm still in contact with some of the people, you know.

Supercode III: Getting Support Now: From Family, FOB, Friends

Support received during pregnancy by family, the baby's father, or significant others was considered an external resource. Pregnant and parenting teens benefit from social support in myriad ways, particularly decreasing depression and improving parenting competence. Only three teens in this study reported no social support and three others had support from friends only. The remaining 17 teens experienced at least one form of support from family and/or the FOB.

My Family is Behind Me: "They Came Around About the Pregnancy"

Over 60% of teens stated that their families had been supportive of them during their pregnancies or had "become supportive" once they got past their initial dissapointment and at times anger, or saw the ultrasound. Teen #527 describes a family dynamic where family members were at first disappointed or angry, but "came around":

> Int: Did you lose any friends or did people change towards you in any way?
> Teen: Not really friends, like mostly my family…well some of my family stopped talking to me but they're coming around and now I understand, like you know, they was probably mad at me or disappointed that I didn't

wait and stuff like that. Mostly my grandmother. Yeah, my father's mom. And my dad was mad at me too but he's not that mad anymore.

Int: How did they show that they were mad at you?

Teen: (Sighs) My grandmother…*she just stop talking to me, like she wanted me to get an abortion and I didn't want to*. So after that she was like, she just basically told me like have a good life, but…

Int: Hmm, what was that like for you?

Teen: It was really…I was mad at her…I was more mad than I was sad. But then…I kind of understood where she was coming from because she was upset or whatever. *But now we talk and everything. She bought me stuff for Christmas (chuckles).*

Int: So she's coming around.

Teen: Yeah. And my dad is too.

Teen #487, who had a very positive relationship with her mother, reported:

> Me and my mom we have a good relationship. Um…when she found out I was pregnant, she was a little, I wouldn't say upset, she was a little disappointed because she wanted me to go off to college and then, you know, have a child. But, she's…*I can honestly say, she's a very proud grandmother. She goes around telling everybody she's about to be grandma. And, yes, me and her have a good relationship.*

Feeling Support from My Baby's Father: "He Stepped Up"

About 40% of teens reported that they felt supported by and cared for the baby's father. This support came in the form of a commitment to be there, and by assisting with preparation for the baby and material support. Some teens expressed a plan, or a wish that they would remain together with some caveats, such as, "He has to get himself together" and wanted to avoid the stressors caused by negative aspects of their relationships, for the baby's sake. Teen #132 expressed hope that she and her boyfriend could "work things out" as parents, stating, "I'm gonna try, he tries on this side and I try on that end and we can make it happen. And like I know we can." Teen #658 indicated surprise at the commitment shown by her baby's father to prepare for the baby, and contrasted it to that of her own father:

> And the most person that been helping me with, you know, getting, gonna get the stuff and everything, is the baby's father. Carriage, crib, cause even though like I…you know, I'm in foster care but he will provide everything for the baby. *I never seen no man do that cause, like my dad, never did that.* My mom always had to do it. Yeah. Taking me to…going with me to appointments, and…looking at the carriages, the crib and stuff, so he's been good.

And Teen #132, noted her plans, concerns, and expected challenges regarding her education, trust and safety, and her collaboration with the FOB:

> I just want to have like…OK, college? So I'm trying to go into college in September. I was gonna leave the baby like with my family, that I *know* that I could trust, his godmother that I *know* that I could trust and his godfather I don't really don't know. And me and my boyfriend, you know, we work it out, he's gonna go to college too. And we…I'm like, you work and I just go to college. And go to college, then we have to make sure our schedule is there for him, *so one of us is there for the baby.* I'm going to breastfeed so I will have bottles prepared already, you know?

My Friends Stuck by Me: "I Saw Who My Real Friends Were"

There was a good deal of variability when teens spoke about the consistency or loss of friendships once their pregnancies became public. Teen #317 stated, "I feel like I realized who my real friends were and who was actually going to be there and those that weren't." A few teens noted somewhat of a dialectic in friends' responses; Teen #316 said for example, "They were really surprised and everything. But you know those who are my friends have been there." And Teen #743 responded:

> Int: Well, how did other people react when you told them you were pregnant? Like friends?
> Teen: It's like, you *are*? Like, you know.
> Int: So you look like you're making a surprised face. They were surprised?
> Teen: Yeah. Surprised I mean like, it was like, the questions like…I'm serious. It was like, OK. And anyways I have to shut up. My mistake (laughs).
> Int: Did your friends stick with you, or did they not want to hang out with you as much?
> Teen: Yeah, they stood by me.

In sum, over 80% of teens reported expectable circumstances early in life and some form, or combination of early support from family, the FOB, and friends, although the latter, less so. Most teens experienced a devolution of circumstances from early school-age to teens years in the form of stressful circumstances that would not be coded under ACEs. These include environmental stressors as well as conflict with others, and internal stressors, such as a persistent pessimism or hopelessness.

Supercode IV: Environmental Stressors

Almost 80% of the teens in this sample reported being exposed to harsh, dangerous, unstable or crowded conditions growing up, and 70% described living in dangerous conditions or experiencing multiple moves, including shelter living. Most teens, with the exception of four, described discordant, harsh and at times frightening environments as time progressed. Subthemes here involved teens' physical environments, such as being exposed to danger, and living in very crowded households.

Feeling Vulnerable to Danger and Violence: "There Was Bad All Around"

About 30% teens spoke about environmental threat—living in dangerous neighborhoods, exposure to danger in their country of origin before emigrating, or being bullied. For example, Teen #497 resided in a housing project in the Bronx and described the micro-level violence and threat she experienced. Initially she discussed a spate of bullying she endured in elementary school, and the emotional impact it had on her, and said "Some girl she used to hit me and she used to call me names and criticize me so that made me feel like I'm nothing," noting that it made her feel "trapped in a box and no one understood." She then portrayed her neighborhood:

Int: What else can you tell me about where you grew up?
Teen: It was horrible. There's horrible people. There's bad everywhere.

Int: What kind of bad did you see?
Teen: People shoot at other people. Stabbing. Doing drugs. It's not the kind of environment you want to be.

Teen #485 described exposure to others forced into sex trafficking prior to emigrating:

Int: What did you not like about_____?
Teen: I seen terrible things. There are kids that get taken off the street and get forced into sex trafficking and *I just couldn't wait to move. But I didn't tell my parents because…I didn't know if I was gonna get in trouble. I was young so I thought I would get in trouble.* And I had one friend who was…I don't know how she managed to escape it. But she had ran away and she came back to her family. But when she came back she never went to school again. She never left the house. She stayed home all the time.
Int. She was so afraid…how about you? When you saw this how did you feel?
Teen: *Unsafe, and my parents were talking for years that we should move*.

Moving Around and Feeling Unstable: "Not My Kind of Life"

About 50% of teens described multiple moves, shelter living, and/or needing to live with other relatives. These teens noted that these residential fluctuations were the consequences of problems within their families, or of poverty that waxed and waned over time, resulting in families' inability to maintain their own homes. Their lives were disrupted by these moves and they had no control over these experiences, at times finding them very distressing or confusing. Teen #557 stated that she experienced housing instability, shelter life, and multiple moves from early on, "in the beginning":

> In the beginning my mom had some domestic violence situations with the father of my sisters, my three older sisters. *She was running from herself, running from problems. We lived in shelters, we lived in different apartment buildings*. I wasn't involved, but my stepfather was incarcerated.

Teen #168 responded to the question about multiple moves:

Int. Before you were taken into care, did you live in one place or did you move around a lot?
Teen: Yeah we did. We was in a lot of shelters.
Int. A lot of shelters…can you say a little bit about what it was like? What's coming to mind as you remember that now?
Teen: Yes! The worst. How dirty it was.

Int. Dirty. What else? What else do you remember about it?
Teen: A lot of drug addicts.
Int. And do you remember what it was like for you inside? How you felt?
Teen: Yeah. *I felt like it wasn't my type of life.*
Int. Wasn't your type of life. Yeah. And what emotions did you feel then?
Teen: Hurt. Sad a lot.

"Bouncing around": Although this was not common, several teens expressed extreme residential instability both in early life and more recently. Teen #878 had been homeless and was about to visit a residential facility in Brooklyn. She characterized her multiple moves with the phrase, "bouncing around":

Teen: At first I was living in Jamaica where I was born until I was like nine…then I moved to New Jersey.
Int: Did your family move around a lot between those times?
Teen: It was only me. I was living by myself. Wasn't living with my family.
Int: Who did you live with after that?
Teen: A family friend.
Int: So after you came here and you lived with this other family, did you stay in one place with them?
Teen: Yes.
NAP: Until you were how old?
Teen: Fifteen.
NAP: Until you were 15? And then what happened?
Teen: I lived with my mother.
NAP: And how long did you live with her?
Teen: Until I finished high school.
NAP: OK. And then you lived here?
Teen: No. I was…I was bouncing around.
NAP: You were bouncing around? Were you living with families or friends?
Teen: No. Friends.

Teen #650 described her mother's bipolar disorder, the multiple moves her mother made with the family, and the unpredictability of her living situation:

Int: So how many different places did you live?
Teen: University, Tremont. Brooklyn. We moved about five or six times.
Int: And who was living with you then?
Teen: Um…it changed. Like all five of my mom's kids at one time. All five of the kids and my mom's boyfriend. Or all five of us with the person I was dating or my sister was dating. You know. It changed.
Int: It changed. So your mom had kids by a different dad?

Teen: Yeah. We all have different dads. Yeah, all five of us. Yeah, none of us have the same father.
Int: What was happening that you moved around so many times?
Teen: Um…my mom really didn't like the apartments, I believe.

No room for us. Some teens described living with many other people. This was a code that involved some self-exploration and reflective memoing, because it was apparent that the number of people in their households may not have seemed unusual to the teens, but it did to members of the research team. Thus, this code became "many people in/crowded," rather than "overcrowded." It was apparent to the research team that this crowding related to long-standing poverty, at times over several generations. Teen #751 stated, for example, "It was hectic cause I think there was too many people living there." Teen #658, in foster care due to truancy, also discussed this, lamenting that her mother and stepfather lived in such a small space that she would not be able to return even if officially deemed possible. She described her grandmother's protective nature and willingness to take her entire family of siblings into her home when her parents fought, which was often, "She took us into her household even though we live in the same neighborhood, all nine of us." Teen #621 discussed her family's need to move in and out of their own home:

Teen: My mom's friend, she's been like renting rooms. And we moved there.
Int: And what was it like living there?
Teen: It wasn't…well, there were a lot of people in the house. 'Cause it had four rooms. And then we all lived in one small room. So we had to…you know, move, like keep to that area and stuff like that.

Supercode V: Interpersonal/Internal Stressors, Feeling Alone and Unsupported

There were a number of teens, although not the majority, who expressed that they felt alone, and were unsupported, separated from those they cared about, and pessimistic about the present and the future. Although more teens were generally optimistic, some

also felt unheard and unsupported by family or FOB, and reported being separated from their families or specific loved family members due to reasons other than foster care removal. Families were separated as an outcome of parents emigrating, family dissolution due to divorce, or death of an important family member, most often a grandmother. Some teens also expressed a sense of fatalism; they could not receive help from others and life was not under their control. While about 35% of teens reported a high level of interpersonal stressors, most of these teens also reported experiencing depression.

Feeling Unsupported by My Family: "We Are Disconnected Right Now"

Families, at least initially, often turn against a teen who becomes pregnant. Slightly more than half these teens stated that they were receiving support from at least one family member during their pregnancies. About 25% of teens noted lack of support. Almost half of the teens in the study were currently in foster care. They reported some support from foster parents and did not discuss interactions with biological families around pregnancy. Teen #132 was living with an aunt she called "mom" and recounted her family's reaction:

> Oh, they were upset. They wanted to go, "*What's wrong with you? You had your life already…dah, dah, dah, dah." My mom told me to get rid of it.* And I'm like, "No," I can't do that like that. This is life, like, you know. Like, it's not the baby's fault. You know? My fault. So, I just got to deal with it. *So I took every crap that everybody threw on me, "Oh, you're this, you're that.* You're dah, dah, dah." And I'm like, "Yeah, that's right, I'm all that. So now I'm gonna be happy *being* all that, somewhere else."

Teen #168 was bitter about her family's reaction, which reinforced her feelings of potentially being a failure in life:

> Int: How did becoming pregnant change things in your life?
> Teen: Well, because a lot of people change on you.
> Int: Hmm, hmm. How did people react to you?
> Teen: Well, my family. The first thing they…said was, oh we knew that was

going to happen. Um…they thought that the child's father was in the life, *so they started calling me like names. And, you know? Talk about oh, I need to go on Maury and, you know? It was terrible.*

Int: Oh gosh, yeah…so how did that make you feel?

Teen: It made me feel like my child was like…like, nobody cared for us…and that *now that he's getting bigger and people see him, like on the sonograms and stuff, they act like they care but it's like that memory with ya'll telling me to get an abortion and telling me to do things I don't want to do…And saying I'm a be a failure as a mom, was just hurtful.* And I'm a still remember that till the day that M_____'s born.

My Baby's Father Isn't Involved: "I'm Doing This Alone"

About 45% of teens felt supported by the FOB, and about 20%, or five teens in this study stated that their baby's father turned against them. Most (over 75%) of teens in the original sample of 36 teens stated that they were in a serious relationship with the baby's father before they became pregnant. At the interview, usually toward the end of the pregnancy, about 50% of the 23 teens in the qualitative study stated they were still involved with the FOB. Teen #901 had been very expressive about her tumultuous relationship with the FOB and used some metaphors to describe how she felt his loss:

> Um…I am depressed because, you know, it feels like I'm going through this by myself. And in a way I am. Um…and the one person who I thought would be here for me, ended up leaving me. And that's my daughter's father. *Yeah, he was actually like my back support. He was my main system, my main back support system. He was like…he was like my ribcage. My spine. He was like my spinal cord.* Yeah, he kept me going. Um…it wasn't like it was paradise. He kept me, you know, moving forward, he kept me going. And since the pregnancy he's just been, you know, a stranger. I don't know him.

Teen #317 expressed the uncertainty of her relationship with her baby's father:

Teen: Um…with the father of the baby I realize that he's never going to change.

Int: In what ways would you hope that he would change?

Teen: He'd actually do something for himself. He'd actually go to school.

Int: Yeah. So you said you hadn't been seeing him these days. Do you wish you could?

Teen: Um…at times I wish I could tell him, you know, like what are you doing? But…I don't know.

Int: You haven't been able to really talk to him? You think he's going to be involved in taking care of the baby at all or helping out?
Teen: *He told me at first, like yeah, he wants to be a part of it and everything, but I mean, I don't know how his situation is now.*

Only two teens reported any interpersonal violence from their baby's father, and none reported perpetrating any violence. One Teen, #650, had experienced physical abuse when she aborted an earlier pregnancy with the father of her current baby, and another stated that she and her baby's father had some serious verbal altercations.

Losing my Grandmother: "My Grandmother Was a Part of Me"

The most common event in these reports of loss was the death of a cherished, important grandmother. For the teens who reported that their grandmothers were more important to them than anyone else, several lost their connection through the grandmother's death or through separation engendered by family discord. For example, Teen #751 described how she was separated from her still-living grandmother:

Teen: I have no relationship with her, cause when I moved out, my uncles and them, they watching her now, 'cause she can't live by herself and they don't want…so they think me and my sisters…we're bad and we don't have nothing going for ourselves and they don't want her speaking to us.
Int: So they prevent you from seeing her…Do you wish you could?
Teen: Yeah, every day.

Teen #132, who was, in her words, "rescued" by her grandmother, conveyed her grief at her grandmother's passing the previous year:

Int: And how old were you when you were the closest to her? Or was it just always since you met her until still passed away?
Teen: Till she passed away last year. I was messed up. I didn't even want to go to school. I was skipping school, I was so like, *I wasn't depressed, but I was just so sad, you know, like I lost something that was like part of me, you know?* It was just very…I couldn't even live without her. Like, I used to when I was little, I used to think, like it was a good question…I used to imagine stuff, I'm like yeah I used to think like what would happen if she were to die? You know? What would I do? *How would I, you know, react*

> *to that and it's just…would say wow, I don't know how I would do it.* I don't know how I made it so far without her.

Not Feeling Heard by My Mother: "I Needed a Guide, Not a Dictator"

The themes "wishing to communicate better" and "not feeling heard and understood" emerged from data spontaneously when asking teens about their relationships with their mothers. Teens characterized this feeling as a stressor, rather than as abuse. In response to the question, what do you wish was different between you and your mom, Teen #316 replied that she would "try to be closer to my kids…try to sit down and get to know us better and have that close connection." Teen #487 noted:

> Um…communication. I wish…We, we can talk but sometimes I feel like, you know, she's not really hearing me. I wish the communication was a little bit there. Like if I would talk to her about something, she'll tell me that, you know, she understands and everything but if I'm going through that same situation, and I go to talk to her, it's like, she's like, she's…*I don't know, she just doesn't understand, like she's listening but it's like not sticking in her head. So it just goes through one ear and out the other*...I'm gonna listen to my child if they have a problem, I mean like she does listen when I have a problem, *but I mean like if my child is talking to me I'm going to have to sit down and really listen. Like, OK, my child is having a problem so I want to hear what he has to say.*

Teen #557 stressed the distinction between a "provider" and a "nurturer." In response to the same question, she indicated that her mother always had good jobs and took care of their home, but that she was emotionally unavailable. This teen was particularly reflective and used metaphor to epitomize how she wanted to be different with her son:

> It's not always about being a provider, like, my child is going to need, you know, comfort and, I feel like it's more than buying him stuff. *I need to be able to hug him and he needs to be able to know that he could speak to me* and talk to me and, you know, be open. *I want to be more of a friend than a disciplinarian. I want to be more of a guide than a dictator.* If she just listened instead of trying to like shut me up all the time, or feel like I'm being disrespectful for, you know, speaking for myself then, I would feel more comfortable with a lot of things that I didn't tell her about. Maybe I wouldn't be in this situation that I'm in now.

Experiencing Stigma and Judgment: "Teen Mothers Get Judged a Lot"

Given that pregnancy is so often portrayed as an intractable "social problem", it is notable that teens in this study generally did not report feeling very stigmatized in the wider world and were more concerned about being denigrated or misunderstood by their families. While few teens in this study reported being judged by the world at large, more noted negative judgments from families—not just about their pregnancies, but in their family members' attitudes toward them generally. For this reason, this theme was divided into two subthemes— "Feeling stigmatized—teen mothers get judged a lot" and "Always feeling misunderstood/not trusted by my family." Teen #497 reported feeling judged by the world at large, and how this point of view different from her own inner dialogue and experience of pregnancy:

> It changed the way people look at me *because they think 'cause you become pregnant you're like a, you know (whispers) say the word, but you're like a bad person* but, and so they think that you're going to be like, you're not gonna have no future for yourself. *Well, I think it's bad because I mean my son been like a motivation to me. To finish school and go to college what I'm going to.* Um, I want to be a nurse. But it's been hard because being pregnant and going to school is very hard. Because at every corner they always judging you. And like, oh, she's not going to go to college. She don't have nothing going in her life.

"They were really surprised." Several teens reported that people in their lives, including parents, friends, and teachers were "shocked" when they found out about the pregnancy, as these teens were known to be focused on school or generally quiet. Teen #359 reported that both friends and mother were surprised at her pregnancy:

> Int: So how did your friends react?
> Teen: They were surprised. Like yeah. They asked a lot of questions.
> Int: And how did other people react?
> Teen: The same way, surprised. They would really ask a lot of questions. I would say uncomfortable.
> Int: How did your mother react?
> Teen: Hmm, how did mom react? Surprised, of course. Kinda upset, too.

And Teen #317, known to be shy, studious, and close to her mother, placed people's surprise in the context of their prior experience with her:

> Teen: Everyone was shocked.
> Int: Why do you suppose they were shocked?
> Teen: Um…I'm guessing because I was really shy.
> Int: Was anybody critical of you at all when you got pregnant? Did you feel the stigma or that people were saying things about you because you were a teen, you were young?
> Teen: In the beginning, yeah. I feel like everyone was more like shocked. They'd go, you're so dumb. Like how could you let that happen?
> Int: So they were shocked but did they say bad things about you?
> Teen: Not that I know of.
> Int: They said, you're so dumb and things like that?
> Teen: Yeah, but I mean that's mostly all I've really heard (chuckles).

My family doesn't get me. An interesting theme here was teens' perceptions and in some cases direct evidence that their family members either thought badly of them, or "didn't get them"—misunderstood who they were as people as well as their motives. This did not necessarily involve the pregnancy but was possibly a kind of projection. For example, Teen #485 described her mother's sarcasm about her future plans:

> Everybody knows my school goal. I want to go to college after high school. I want to get my Ph.D and I want to become a psychologist. *She is like, OK, you're gonna finish high school, oh, she'll be sarcastic about it, like she doesn't think I'm going to finish.* And I think to her it's like tough love, but sometimes I just need that support just let me know that you're in my corner.

Teen #743 was the one teen in the study who reported that her grandmother was strict and judgmental. Here she explains the difference between her grandmother's view of her connection to her schooling, and her own:

> 'Cause she used to tell me, oh, she used to doubt me when I was in middle school, she's like, "Well, you never gonna graduate, this that and the third, if you keep acting like this in school" or whatever. But I did graduated from middle school. Yeah so now I know she probably saying the same thing whatever cause I'm in high school but, you know, I'm about to graduate so…

Feeling Separated from My Family: "Wishing to be Together"

One pattern in the data was teens' expressed wish for family unity and relatedness. Teen #581 experienced a separation from her parents at age four when they emigrated from Mexico, leaving her and her sister behind with grandparents. She was deeply affected by their absence:

Int: Can you tell us what kind of environment did you grow up in? Tell us about where you grew up.
Teen: I grew up…first I grew up with my grandparents in Mexico. Then me and my sister moved to the United States with our parents. Mostly at the time we were alone, feel alone cause our parents were here. We were separate and most of the time I felt alone. I felt like the mother of my sister.
NAP: I see. OK. How old were you when you moved here?
Teen: I was 13.
NAP: So do you remember how you felt during that time?
Teen: *Upset. I was upset and angry at the same time because my parents left us alone, and, I feel like…I was depressed. Our grandparents were like, they were supportive but I felt I was alone with my sister.*

Teen #658 had been truant on and off for years and was in a foster home in Brooklyn. While she had a good relationship with a supportive foster mother, she spoke wistfully of the separation from her own mother who had been struggling financially:

Int: Like what sorts of things are happening in your life right now that you don't like that you wish could be different?
Teen: Um…I never, you know, wish nothing could go back. I just wish, you know, I had my mom with me, you know, could just go back and just wish for my mom again. *There's nothing the same without a mom to be with a real, you know, your real blood, your real*…hmm, hmm.
Int: So how do you think that is affecting you now, not being with your mom?
Teen: *Um…'Cause you know I really miss her*. We used to help each other out. Even if I wasn't pregnant, you know, I used to help her all with stuff with her babies that she had. *So, you know, it kind of makes me a little bit sad and, you know, affects me sometimes, like why I just didn't go to school, a simple thing to do.*

Not Getting Help: "My Workers Don't Do Anything"

About 25% of teens were not particularly sanguine about their prospects for relating to or obtaining assistance from helping professionals, or felt that other people would be there for them. These were teens who had suffered quite a bit. For example, Teen #878 was searching for a place to live and a source of income. She was quite exhausted, had experienced homelessness and multiple moves, and indicated her lack of faith in service providers and a learned reliance upon herself:

Int: So what kind of problems do you think you might be having that you could have…you could, you know, use more help with?
Teen: Um…Housing and money.
Int: Housing and money. So tell me about the help that you're getting now with this?
Teen: I'm helping myself. Um…trying to help myself.
Int: You're helping yourself. How are you helping yourself?
Teen: By findings programs that could help me.
Int: Are the people here, the caseworkers here, helping you?
Teen: Not caseworking. It doesn't help me.

Teen #743, living with a foster family and receiving services from a foster care agency, expressed her feelings about the assistance she was receiving there:

Int: So do you think you're having any problems right now taking care of your baby? You know, setting up the…you know, your life to have him in your life, to take care of your health?
Teen: No. I feel like I got everything down pat. Because I'm having support from…I'm having a lot of support from my foster parents. So she like helping me be prepared for everything. Unlike my workers, they don't help with anything.
Int: Hmm, hmm. The workers here?
Teen: Yeah. They don't help with anything. They always saying, they always making sure about like, cause, I'm like involved in ACS so they're always axing me about my pregnancy and my appointments. But they never help like, if they said they're gonna to do something, they don't do it.

Negotiating an Uncertain Future: "I'm Not in Control of Anything"

About 25% of teens revealed an inner dialectic of pessimism and doubt. Even while expressing a positive view of pregnancy and noting that things could potentially get better, these teens felt distress at the prospect of an uncertain, nebulous future. During focused coding, this uncertainty came to be regarded as an internal stressor. This code was supported by quotes that reflected teens' felt lack of agency and an existential sense of life being out of their control, as well as the kinds of everyday things that they anticipated would be outside their control and would add to their stress level. For example, Teen #557, whose living situation was very tenuous, revealed these concerns:

> Um…I'm just kinda afraid, worried, it's just so many different negative emotions about what kind of parent I'll be able to be as far as, you know, what my situation is like. I want to be able for him to know that I'm trying my best. *And, um…I worry about not really doing my best because I'm not in control of a lot of things, but…I feel like the main thing is that I really love my baby.*

Teen #621 was living with her mother and many family members and was not sanguine about her prospects in general. She revealed her relative pessimism in the following quote; her uncertainty was not only evident in what she said, but how she said it, showing a lack of coherence and a low level of planfulness and agency:

> Int: So what are your plans for yourself and your baby once the baby's born?
> Teen: My plans? Um…well when he's here…I don't know. I…like I don't know what I'm going to do. I feel like I'm just going to have him here…Yeah. But I did think about what I would do but I don't have anything like…I need to like think about it more.
> Int: All right, OK, so your plan is not in place yet…
> Teen: Yeah.

Supercode VI: Experiencing ACEs: Abuse, Harshness, Neglect

Exposure to ACEs, all forms of child abuse and witnessing violence was very high in this group of teens. The majority of this abuse and violence came from mothers,

fathers, stepfathers, and various levels within the foster care system. I utilized the categories exemplified in the ACE survey (Felitti et al., 1998) as a scaffolding to code responses indicative of early interpersonal trauma, as the number of ACEs has significance within the cumulative disadvantage paradigm. It is also helpful for addressing some of the major questions asked in this study about the impact of early abuse and attachment disruption on teens' current perceptions of pregnancy and parenting. Some teens experienced a significant paradox with primary attachment figures—where parents are loving as well as abusive, or caring and yet a source of alarm and fear. Teens often used metaphor to describe these relationships, and reflected on the impact they had on their own impending motherhood. Many stated repeatedly that they were motivated to "do it differently" and reflected on how they would be better parents.

Feeling Unlovable: "Who Can Love Me if My Mother Can't?"

Teen reported on ways that their mothers were "not mother figures." This did not necessarily involve physical abuse but included psychological disconnection and harsh treatment. This theme is captured by the phrase used by Teen #485, "there must be something wrong with me, *because she don't like me and then nobody's going to*." Teen #168, who was in foster care and spent much of her early life in shelters, noted that her "Mom was addicted to men and didn't care about us." Later, when removed to foster care she reflected on the impact of having a mother who was not a mother figure, "I hope I'm a good mother to M. because, how can I be something that I never had?" She noted that she read a lot and looked at parenting websites to make ensure she would be the best parent she could be. Teen #739, who was placed due to her mother's threats during her pregnancy, responded to interviewer's questions about why she had been placed at 17.

This quote was particularly affecting in that the teen not only had sophisticated knowledge about her mother's mental health condition and medication, but also, because she ascribed her mother's threats and emotional violence to her alcohol and medication intake, perhaps preserving a wished-for image untainted by this violence:

> Int: Can say why you had to leave now (was removed)? Is it okay to talk about that?
> Teen: 'Cause I actually I had gotten into an altercation with my brother, like we was arguing and she wanted me to leave the house. *And she actually threatened me that if I was to come back home, that I was going to have no baby.* So I took that seriously but at the same time she had a hangover and she's taking medication like Seroquel which is a mood stabilizer.
> Int: It is, yeah. So she's said some rough things to you, scary things.
> Teen: Yeah. *And I feel like it came from the alcohol and the pills.* 'Cause I don't want to put that…*I don't want to take it as she meant it, like the way she said it. I want to know that, you know, I want to have in my head, like OK, she is…is it because of her drinking and the pills.*

Teen #650, whose mother's bipolar disorder rendered her so unpredictable that the interview was conducted outside under a porch, explained her proactive approach to planning for her safety and stability in the context of her mother's unpredictability:

> Soon as I found out I was pregnant, I immediately started looking for programs that could help me. As soon as I found out. I was like what can I do? Um…is there a mother and child? Do they take me now? I was calling places. *I was just like because my mom suffers from bipolar depression or whatever sometimes like she's supportive and sometimes when we get into arguments she wants me to move out. So I'm like you know what? I'm about to have a kid. I can't just think, oh, my mom is okay right now, later on she's not going to switch. You know.*

Mom put partying/a man before us. Several teens discussed mothers placing value on youthful activities such as "partying" rather than on their children, and prioritizing men over their children. For example, Teen #739 noted that she spent a good deal of time with her "loving, sweet and warm" grandmother due to her mother's insistence on leaving her with her grandmother so that she could go out, "And I was young so I had school at the time, and she used to just leave me and then she used to go

out clubbing and drinking." Teen #743 cogently described the impact of her mother's prioritizing of men over her children:

> So…nah. *You don't choose a guy over your kids because you making your kids feel less like important and whatever cause my mother she did that*, that's why I moved away from her at first because me and her like wasn't on the same page cause she's always trying to take her boyfriend's side over something when she know he be wrong. So…I was like OK, *like she tried to kick me out so I was like I'm not leaving until he leaves. She's like Oh, he's not leaving, you don't live here*. Ha ha…I was like, he doesn't live here either. So…

Teen #132 reflected on how differently she would do things in this regard:

> I would…make my kid my priority. Like not try to hang outside, not try to do with guys, not trying to, you know, the more time you do that, is just wasting time, *you're wasting your kid's life, you're missing their life. I don't want miss not one second, not one second.*

Dad/Stepdad Was Absent, Frightening: "I Just Wanted that Father Figure"

About 75% of teens reported negative relationships with their fathers or father figures. Distress with respect to daughter-father relationships involved feelings of abandonment, "I miss my dad—he left, had another family". Teens' discourse was wistful, "I didn't get love from my dad so I look for it elsewhere," and/or fearful, "I was afraid, he was drunk and violent, I had to protect my mom." Twelve teens reported that their fathers were often absent, non-communicative, or violent. Of these, only two teens were in supportive relationships now with the FOB. Seven teens reported living with an alcoholic parent, and in five of these interviews, there was overlap between alcohol abuse and violence in fathers and father figures. The codes that supported this theme were also coded most consistently with "witnessing violence." Code co-occurrence analysis revealed that this subtheme was most connected in teens' narratives with the experience of mental health problems, shame, exposure to instability, and closeness to grandmothers.

"You feel afraid after a while." About 25% of teens experienced violence directly from fathers or stepfathers, or were witness to extreme violence between their parents. Initially, the code "living with an alcoholic parent/caregiver" was a standalone code, but upon further reflection of code networks it became obvious that there was almost 100% correspondence between quotes provided by teens who lived with an alcoholic parent and those who said they felt frightened by their fathers. Teen #317 described verbal and physical violence between her heavily-drinking biological father and her mother before he left, and her reaction to what she saw: "He would actually hit my mom…many times she was bleeding." She also expressed trepidation about whether she too would be hit. Teen #497 described her early life with her biological father:

> "So I've always, since…I was little, you know, I had to protect my mom and I had to protect my little brother from my own father." It was horrible because he would get drunk and then he would start screaming out of nowhere. *So…you feel afraid after a while. And you shouldn't feel like that toward your father so…*

Later, she described her relationship with her stepfather, who also drank and did perpetrate violence again her. She was living with an aunt at the time because of her stepfather's behavior, and was one of several young women who not only described this violence but her self-protective response. She also reflected on his imposed dominance in the household and intolerance of her self-expression, and what she thought of it:

> Int: So what would you be afraid of now, in your own home with your stepfather, if you were there?
> Teen: Um, I'm not afraid of him (whispers). I just feel like me and him don't get along and I don't want to be there and, you know, like say something bad and, you know, he calls the cops on me…'cause you know *he's the kind of person that you don't to be around with, like a really ignorant person.*
> Int: Yeah. Has he ever done that to you? Call the cops on you?
> Teen: Yeah. Well, because…a couple of years ago, he tried to hit me with something…and *because I was saying my opinion about something and, like he sometimes find it disrespectful to say your opinion,* so he found that I was disrespectful and he got very angry and he was gonna hit me with

something, so I punched him in the nose. So he called the cops on me.
Int: You defended yourself.
Teen: Yeah, before, he hit me with a chair. *I didn't want to get hit with a chair.*

Dad left, had another family. Almost half of teens stated that that their fathers had never been around. Teen #487 spent much of the interview describing her reaction to her father's new family, and how his absence affected her, noting "I wish that, you know, I had that father figure in my life." Either their fathers had left their mothers before they were born—Teen #359 stated, "my mom's always taken care of me and stuff. Um…so she works, like I don't have like a father and stuff," or, they left fairly early on. Teen #317 remarked, "He found a wife and I guess he just kind of disappeared." Teen #739 noted that she began to question her father's absence:

Int: Were there any other kids around?
Teen: No, not until my father had an affair and he started having his own kids with that lady. So then I had step-siblings.
Int: Hmm, hmm. So how old were you when your dad had his affair?
Teen: He was…I was five years old when I noticed he was out of my life and *I started axing questions like, mom, what happened to dad? You know?*

Dad couldn't hold a job. Some teens noted their fathers' inability to support the family, fostering insecurity with respect to basic survival or a sense that things weren't safe. Teen #168 described what happened after her father's new wife "kicked them out" and how she got back into care, "Yeah, after, my dad…couldn't hold a job. So…well, I was hungry and there was never no food and I just got tired of that." Teen #132 described her father's involvement in drug dealing, and how it separated him from her. Her desire to know her father, and her ambivalence about him are evident in this quote:

> My dad got deported when I…maybe nine…ten years ago? In 2000…and something…2000 and something he got deported. He…is a big time drug dealer. Yeah, yeah, here, PA and New York. So they finally caught onto him or somebody, you know, snitched him out and…they caught him. *I was always curious,* and he would never tell me what he did, you know, so I used to cry and

> stuff a lot. But then I had, like, you know, Google works wonders cause, you know, my family ended up telling me little-by-little like what he did. I'm like, *I mean I already had a clue what he did*, but, I figured let me Google it and then his whole case file comes up and a picture of him. You know, I'm like, *there goes my beautiful father.*

In a similar vein, Teen #497 reflected on her father's inability to remain employed as a function of his substance use in the context of his violence and alcoholism:

> And my father didn't work 'cause he would always quit jobs. He would really not work 'cause he was like involved in drugs. So he would ax my mom for money and, you know, he wouldn't like try to get a job or anything. He'd just be home all day.

Experiencing Verbal/Psychological Abuse: "All They Did Was Hurt Me"

Few teens described being emotionally abused using that term and most discussed it within a larger picture of abuse. One teen in foster care mentioned verbal abuse specifically as "my mother was just always verbally abusing me," also saying about her father, "he was very verbally abusive." Teen #523 stated that if she spoke about her father, she would be "in a bad mood for two days," because he "was just very mean":

> Like when I was younger I didn't want to talk to my dad and my mom made me. Last November, 'cause I stopped talking to him, that was the last time I spoke to him. I told my mom, I wish she wouldn't ever make me talk to him again because all he did was hurt me.

Being Sexually Abused: What Happened to Me

Although this study was not designed to explore sexual abuse among teens who become pregnant in particular, seven teens reported experiencing sexual abuse as children. They described their experiences and fear of informing families or of being betrayed by their families' denial of the incident. Teen #901, who had one of the most extensive histories of trauma and over 30 foster care placements, reported, "From seven until I was nine years old, I was getting raped by my foster father. He was um…42.

Yeah…that changed me a *whole* lot." Teen #485 did not tell her parents that she was raped at age 10 by a 21-year-old man she met in an on-line chat room:

> Teen: When I was 10 years old, I…you know your parents always tell you don't talk to strangers, don't talk to people on the internet, don't talk to people in the street and I chose not to *listen because I'm hardheaded and I wanted to do things my own way*. But when I talked to this guy, I was ten and he was 21.
> Int: This is when you were still in _____ or did you come here?
> Teen: I had just came here. And I honestly thought that we were just going to go and hang out, watch a movie or something. And his intentions were completely different from mine. *And needless to say he raped me.*

Teen #650 discusses the reasons for her removal at age two:

> Teen: You know, not just have anybody around my daughter because I was sexually abused.
> Int: Ah…and how old were you?
> Teen: And that's why…I was two years old.
> Int: Do you know who abused you?
> Teen: I don't know who the person is. And since I've grown up, I've had two people's names added to the list that might have done it. *And the sad thing about it is I contracted an STD at two years old.* I contracted gonorrhea…

Witnessing Violence in My Home: "They Were Fighting in Front of Me"

Thirty-five percent of teens in the study reported witnessing or being involved in fighting in school or witnessing violence or fighting in their homes as children. Although no teens stated that they experienced IPV during their pregnancies, most, at various points in the interview, said that they witnessed or experienced violence as young children or, most frequently, as school-aged or young teens. Violence was sometimes but not always related to a parent or caregiver's alcoholism. The few qualitative studies that inquired directly about pregnant teens' history of abuse and violence garnered very similar responses to those in the present study. Teen #485 described a rare but striking episode of sibling violence, where her much older brother accused her of stealing money

and threatened to hurt her. She stabbed him in self-defense and ran away from home after this incident. She was placed in detention upon her return, and remarked on this:

> Teen: Yeah and I told him, I said, I don't want to have to do it but I will. Don't put your hands on me. You can wait till our father gets home and we can talk about it then, but don't touch me. And he didn't listen to me. And that's…I did what I thought like I had to do. I had the butcher knife, I got it from the kitchen.
> Int: So you were ready for him. What did you feel in that moment that you were about to…
> Teen: I felt scared, but I felt like this is the only way, because he's big, he's strong and big and he's got six years on me. *So I'm like OK, well, I mean I have no chance if I just get into just a regular fight with him.* I'm 13 years old. I was small, it was really, like I have no chance. *So this is the only way I'm going to be able to defend myself.*

Several teens witnessed emotional and physical violence between parents. These teens were also those who stopped arguing and fighting when they became pregnant. Teen #739 for example, described what had happened between her parents during the dissolution of their marriage:

> Int: Can you say more about what was going on with him and your mom then?
> Teen: They was actually arguing at the time when I was young. They was going through a crazy break-up.
> Int: Because of this affair?
> Teen: Yeah, and I was in the middle, but I was little. But you know I seen somewhat of, you know, what was going on.
> Int: You saw them fighting?
> Teen: *Yeah, fighting in front of me when I was young.*

I was Neglected, Passed Around: "They Gave Me to Whoever"

A common theme was material and emotional neglect. About 35% of teens remarked on this and their discourse fell under the rubric of "I was passed around," or "they weren't there for me." Teen #168 described this experience. When asked about the environment she grew up in, she stated that it was "messed up" and described how her

mother was "…addicted to men instead of her kids and she didn't care about us. Why she kept the babies if she wasn't going to take care of 'em, and then to have *more*…?"

Teen #132 stated:

> Teen: She's been passing me around since I was like three months. Cause I don't know…I guess it was too much to having a baby. *She wanted to have fun and her and my dad went together so…he was doing him, you know.*
> Int: So…she placed you with your aunts and uncles. It wasn't like ACS came and took you there?
> Teen: Uh, uh. No, she felt like she couldn't, but when she felt like she could, she took me back and then when she feel like she couldn't again, *you know, that shit, gave me back to whoever.*

Teen #751 described a lack of concern and inadequate provision of resources with respect to her education, and the difference between how she and her parents saw herself:

> And I was always going to school but I would never have the stuff I needed to go to school. So it came to the point that I was going to graduate…I was going into high school and I was supposed to graduate middle school, and they did not buy nothing for me as far as my cap and gown, nothing for me to graduate with 'cause they thought I wasn't passing my classes. *I would come from school and send them my report cards but they never went to the school to find out.* Yeah, I was always passing.

Experiencing Abuse in Foster Care: "For Me It Was Torture"

The 10 teens interviewed who were or had been in foster care proved to be a special group. These teens experienced more trauma and loss than others, but their discourse showed the most evidence of resilience in the face of trauma. Teens described the process of being removed from their families, "I was taken," the multiple placements they experienced, and the circumstances under which this took place. The reasons for removal ran the gamut from neglect to truancy to abuse. Teen #743 described how her mother's choices rendered the family homeless and resulted in removal from her home and separation from her siblings:

Teen: My mother had moved. She was living in Staten Island. She had moved to down south, and then I guess we were there for an amount of time or whatever, so we had came back up and she…*cause, you know, once you move you don't have the place no more, so like where you lived at. So they took us away, me and my little brother*. I have two more but they was already down south but they didn't come back. *They didn't come down with us. It was only me and my little last brother.*

Int: And then you went to your grandmother after that?

Teen: No. I went to the residential…No, I got tooken from ACS, *then…*I was staying there now until a foster home*, after they found my other two little brothers, so it was just like the four of us and then we went to my old foster mother whatever I used to be with, my three little brothers are still with her and I went to a residential.*

I was somebody's hittin' doll. The subtheme of physical abuse, captured by this vernacular is presented within the context of foster care as only the teens in this study who had the experience of been removed to care reported physical abuse from family members or foster parents. Teens in the current study described these experiences against the backdrop of placements and upon reunification. For example, Teen #168 described what happened to her between placements, using this poignant, descriptive phrase:

Int: The time that you felt the most emotionally upset, what was happening in your life then?

Teen: When I was getting abused. That was making me upset.

Int: And you had two times in your life when it was really bad? With your mother's girlfriend and then later on…

Teen: My father's wife.

Int: Yeah. What kind of abuse was she doing to you?

Teen: Like hitting me with belts.

Int: And what was the emotion that you felt most during those times?

Teen: Like I wasn't being cared for. *I was just somebody's hitting doll.*

Harm from within the system. Teen #901 describes her exposure to neglect at the hands of "the system" and the abuse she experienced in one of her many placements:

> I feel that the agency…*the system…doesn't care exactly who they put you with as long as they think they know you have a bed to sleep on*. And as long as the foster parent shows them what they want to see, then they feel like, you know, it's OK, let her stay there, but most of my families I either got beat, I either got verbally abused, um…sexually abused. *For me it was torture because I was young.*

> *Um…so in my case it was like I got tortured.* I've had times where I would get choked up against the wall and my feet wouldn't even be touching the wall…the floor no more, I mean. I got times where I got beat out of my sleep with a belt. Um…there were times when um…I got slapped around. I would have to clean the walls. Um…there was this one time I woke up sick, throwing up in the bathroom and the foster mother didn't even come ax me if I was OK. She just said clean that shit up. Um…so it was tough.

Teens described some unconstructive or at times frankly traumatic interactions with service providers. Although only 25% of teens made such statements, some teens, like #168 noted that guards in a RTC did not protect the female residents, stating "It was a lot of nasty boys, they always tried to talk to the girls and try to do things with them. And the guards…like they act like they don't care." Teen #901 described a disturbing scenario where her caseworker seemed to collude with her foster mother and overtly approved of her physical abuse. She discussed running away from that foster home:

> I remember *there was this one social worker who came to the house and she basically gave consent to (foster mother) for her to beat on me*. Um…I forgot what they were talking about but she was just like, she said, she said something, she said, I forgot exactly what she said but I know she said something like, *"Oh, you know, sometimes these kids do need a little…need a little ass whipping" or something like that.* And I was sitting there and I'm like OK you're supposed to be my social worker. Yeah, I'm like…*You're supposed to be my social worker and you're giving her consent to beat me.*

Detention/hospitalization. Although few teens discussed being detained, several described their experiences in detention centers, psychiatric facilities, and residential treatment centers (RTCs). Four teens were eventually sent to detention or psychiatric hospitals. For example, Teen #485 explained what happened to her after she stabbed her brother in self-defense, and reflected on the dichotomy between how she saw herself and the milieu of placement:

> Teen: DSS. They came and they put me in a Detention Center.
> Int: How long were you there?

Teen: I was there for like two or three months and then they put me in a placement called H____. And I was at ___ (RTC) for ten months and I was just like, they put me all over. They put me in a mental hospital one time, they had no reason. They put me from H___ in a mental hospital.
Int: What was happening in H___ that they put you in a…
Teen: They thought I was homicidal, because I was playing around with somebody. I was like shut up, I'll kill you, but everybody was saying it and I was the only person who got put in a mental hospital. It wasn't a real mental…It was a mental hospital but it was like…
Int: What was it like when you weren't really homicidal?
Teen: Most of the people there came from the placement, and the placement they, I guess I don't know if they get more money when they send us there but…they had a lot of kids there and I knew a lot of the kids and I knew there was nothing wrong with them.

Teen #751, generally a highly resilient young woman, was put into care at age 14 when her mother returned to this country from Haiti to live with her for the first time. She described the difficulties involved in getting to know her and experiencing her rough and unfamiliar forms of discipline, including beatings and the "lock out." She explained what happened after a history of fighting, but in the context of wanting to do well and utilizing the experience of detention in a positive way:

Int: And then she decided to discipline you in her way. And what was going on for you at the time? What was that like for you?
Teen: I had got arrested for at least six months and I went to a juvenile…'cause I was always fighting.
Int: Was that in school?
Teen: No. Outside of school.
Int: And you had to go to juvenile, how long did you stay there?
Teen: About six months.
Int: What was it like there?
Teen: It was better for me, 'cause I stopped…getting into…I stopped fighting. I learned I didn't want to be there. I learned a lot of stuff. I wouldn't want to go back there. I was always going to school. School was like never a problem for me.
Int: So school is Number One?
Teen: Yeah.

Teens in this study described, for the most part, early lives in which security and safety, if it did exist, ebbed away and was replaced by cumulative stress and ACE

exposure. The majority of teens reported experiencing emotional, or mental health problems dovetailing with symptoms of C-PTS which may have been the consequences of these adverse experiences, and these are articulated in following section.

Supercode VII: Experiencing Mental Health Problems

Teens gave a plethora of responses to the question that explored whether they had ever experienced emotional problems. The data that emerged came from two questions—first, things that happened to them, and second, whether they had problems with their emotions or feelings as a result of these events. Only five reported experiencing none, or very few mental health challenges over the course of their lives, and two of those teens stated they did not wish to discuss this. The subthemes coded were experiencing: "fear and dysregulation," "suppressing, dissociating/self-medicating to avoid feeling," "sadness and depression," "mostly angry," "no one to talk to, self-blame," and "guardedness, mistrust." The code-by-primary document function of Atlas.ti revealed that about 50% of teens in this study experienced at least three aspects of C-PTS, including depression, fear and dysregulation, feeling angry a lot, and forms of dissociation. This finding did not exclude those who were most resilient: about 75% of the most resilient teens experienced at least two mental health problems. The extent to which teens reported this did not vary directionally with positive perspective on the pregnancy, but was more likely a function of accumulating ACEs and stressors. Eight of the eleven teens who experienced three or more ACEs also experienced at least two mental health problems.

Experiencing Fear, Dysregulation: "It Just Comes Over Me"

Teens did not use the word "anxiety" when talking about their emotional state. They used the word "scared" to express feeling fearful and at times feeling dysregulated,

regarding PTS-like symptoms or self-harm. For example, Teen #168 described being taken over by a fearful feeling with no discernable source, "well, sometimes the fear comes from like, how do I say…sometimes when I get like scared, it's just being scared, not only for myself but for him, you know?" Teen #497 discussed the impact of living in the projects and experiencing a traumatic event, possibly a sexual assault. She would not elaborate on this but was able to describe the emotional impact it has on her currently:

> Living in the projects affects me. I made very bad friends. Something ended up happening to me that changed my view of things—changed my view of men. I can't look a man in the eye, I look away. People ask why I look away. I feel not afraid of men, but kinda always hate them. *I try to put my past behind me but it's hard to start now. I never look my boyfriend in the eye. My boyfriend gets angry—he feels I am scared. I flinch all the time, like I got jumpy.*

Teen #485 was the only teen to indicate that she engaged in self-harm when she felt emotionally dysregulated, and articulated PTSD symptoms clearly. She elaborated on the helpful responses of staff at a detention center:

> I had two mentors and I would talk to the staff 'cause *I would have random flashbacks throughout the middle of the day and nothing triggered it,* it would just…I just start having flashbacks and they'd…They'd figure out like when I was having flashbacks and they would talk about it. And they always told me that it was not your fault and, you when I sat down in the group and I talked to other girls and we all sat down and talked that's when I really realized like…And it feels good that you're not alone. That you're not going through it by yourself.

Suppressing, Dissociating, Self-Medicating: "Blacking It All Out"

Although few teens discussed dissociating as an experienced phenomenon, they did talk about ways in which they wanted to repress memories. Some teens flatly denied the impact of past experiences. Teen #523, living in a shelter with her mother, said, when asked if she had ever been angry or scared, said, "Oh, everybody gets like that at some point," and #168, when asked how "being someone's hitting doll" still affects her replied, "No, I'm over it." Teens used phrases like blocked, or "blacked" things out, a figure of

speech used by Teen #497. She described her initial "disappointment" when she became pregnant; she stated she drank so much she ended up in the hospital, explained this, and indicated that she may have experienced trauma-related dissociation:

> I thought I was gonna have an abortion but I couldn't go through it so that made me very upset and it got me stressed out. So I was drinking like a lot and then one day I ended up in the hospital. *Yeah, because when bad things happen, like when bad things happen back then, I blacked everything out. I try my best not to remember them.* If you ax me, like do I know details like, I remember vividly a little bit of stuff. Of what happened in my childhood. But if you ax me to point out certain parts in my timeline, I'll tell you I don't remember because I block them out. I self-medicated, you know.

Teen #901, in the context of speculating about the effects of her experience of sexual abuse, mused:

> *I don't know, like it's hard to explain 'cause I haven't, you know, really went down memory lane (laughs). I keep that part of me so blocked out. It's, you know, my own therapist doesn't really know how to get it out of me.* But, um, I'm only doing this for the research. It changed me because it made me look at men differently, I guess. Um…it's hard to explain.

Teen #650 described her decision to have an abortion with a prior pregnancy at 17, other serious stressors, and the severe depression and increased marijuana use that ensued:

> I was spending roughly about, fifty/fifty, about $200 a week on marijuana *just to get away*, you know. Then on top of that be homeless, just got rid of the baby. My child's father is in jail, you know. It was like…

Experiencing Sadness, Depression: "Feeling Depressed Out of Nowhere"

Almost 50% of teens noted depression at specific times. Several teens described what may have been clinical depressive episodes. Some, like Teen #650, described such an episode in response to traumatic loss, and others, like Teens #485 and 901, as a recurring disorder. Teen #485 discussed her depression as a "free-standing" mental health problem, but one that her family and husband were aware of:

> Int: Was there any time you felt down or sad or down?

Teen: Yeah. I would have um…*like long periods of time that I would go through, depressed states, over a month, and I just really depressed.*
Int: Come out of it kind of by yourself?
Teen: Yeah. And slowly come out and then I'd be like a whole different person.
Int: And when would you feel those depressions?
Teen: They just came. Nothing triggered it. It just came and went.
Int: And how about now? Do you feel those kinds of low moods or…
Teen: Sometimes…not often. But my parents know about it. My husband knows about it. So whenever I feel that way I know I always have somebody to come and talk to me.

Teen #901 also characterized her depression as a disorder, independent of specific events:

> Um…before I got pregnant I was, um…*I had major depressive disorder and um…I would probably become depressed out of nowhere or it would be something that triggered me to become depressed, but I wouldn't know what exactly triggered me*. All I know is just like all of a sudden I'm just down, you know, and I would tend to feel suicidal and um…it happens yearly so it's not like a year that I go without, not, you know, feeling sad or anything like that.

I Was Mostly Angry: "I Just Lashed Out"

Almost half of the teens discussed and elaborated on periods of their lives when they experienced anger. Participant # 557 described a pivotal time in her early life, considering both her mental health and subjective feelings of being alone and unheard and her attempts to address the problem within herself:

> "It was my grade school years. I was feeling really angry all the time, felt really lonely. *I wanted to lash out. Nobody would care or hear me. I took in a lot.* I tried to counsel myself, tried to help myself, but it didn't work until I started talking to someone else (counselor)."

Teen #527 describes both guardedness and aggressive behavior as an internal protective function as well as a model, or reflection of her father's behavior:

> Ah, I don't know, maybe I could say that probably affected the way that I am with my boyfriend *because since I've seen like my father so aggressive…with my mother…I'm, like so protective over myself that sometimes I find myself being too aggressive with my boyfriend*, just because I don't want him to feel like he could do that to me. Like, yeah. Like I'm kind of a little bit too defensive sometimes when I don't need to be because I've seen that happen to my father.

Feeling Shamed and Blamed: "Keeping it All Inside"

There were a few teens, about 20%, who felt that they could be blamed for the things that happened to them, and held onto these beliefs as no one interceded and explained things to them. This internal process can exacerbate shame and mistrust, which several teens expressed, seeming to take in the responsibility for their abuse. Teen #485 was too frightened to tell her parents that she was raped at 11 because she contacted a man in an on-line chat room, and stated:

> I didn't tell my parents until I turned 13, 'cause I was scared. Yeah. I didn't tell anyone. I didn't trust anybody. Anybody. I didn't trust my mom. I didn't trust anybody. I felt like…

She also noted that she took the blame for what happened to her, as there was no one to tell her that adults are responsible for abuse they perpetrate on children:

> Int: Did you experience different feelings about yourself after?
> Teen: Yeah, I figured something had to be…like I really thought something had to be wrong with me 'cause I didn't do nothing to him. And for him to take advantage of me, I was like something is wrong with me. *Because you just don't do that to people who don't do anything wrong.*
> Int: It didn't occur to you that something was wrong with *him*?
> Teen: At the time, no.

"I'm a guarded person." About half of the study participants depicted their behavior as "guarded," or "mistrustful." They described experiences that were relationship-interfering, or simply noticed these feelings and the defensive or reserved posture they sometimes took. For example, Teen #557 exhibited a high degree of reflectivity throughout the interview, and reflected on how she became, as she called herself, a "guarded person":

> Hmmm. High school was a time where a lot of people, kind of made me feel like I was left there and some things like that. *So I guess now I'm a very defensive person and I kinda have this mentality like, always get them before they get me kinda thing because people will outcast me and tease me and things like that, and*

> *because I didn't have the support I needed at home, I would just either completely like fall into myself and my feelings or lash out.* It's like everybody that I had close to me kinda showed me something different. *So…now when they try to get close to me, it's like, you know…I'm on guard. I'm a very guarded person.*

Some teens provided evidence of guardedness in the interview. For example, Teen #638, generally not able to engage, responded to the query about whether problems she had faced affected her emotions and stated, "I don't want to quote that." Lastly, Teen #581 also reflected on the impact of her father's drinking on her feelings, explaining that she became afraid of people, but she no longer was affected by it:

> I was feeling sad and nervous all the time, since I was little. When I saw my father drinking*, that made me shy.* But I don't care anymore, he would drink and then he would forget so the next day it was like nothing for him.

When asked what she might like to change in her life though, she replied:

> The way I take (make) decisions. Um…most of the time I can't speak with people. I don't know why. I don't know how to express myself. *I don't know how to stay with people and like I prefer to stay quiet.* '

Despite these struggles with their mental health at various time points in their lives, teens viewed pregnancy as a "light at the end of the tunnel," a way out of a difficult, dangerous, and at times unhealthy life. For most teens, their feelings toward their unborn infants superceded these struggles during their pregnancies. The following section presents teens' views of their pregnancy health and behavior in the context of their past and current lives.

Supercode VIII: Pregnancy is a Way to a Better Life

The experience of pregnancy is the central theme for the study. Teens' descriptions of pregnancy as a watershed event encompassed how pregnancy changed their thinking and behavior and how they perceived the impact of their pregnancies on their lives and developmental path. Teens reported becoming responsible, thinking more

positively, altering dangerous health behavior, and feeling a growing attachment and bond to their infants. Some teens simply wished to follow advice and their own good sense about what to take into their bodies and how to protect themselves physically and emotionally during pregnancy, reflecting a general desire to stay healthy.

Becoming Responsible: "Pregnancy Changed Me from a Kid to a Mom"

This was a very well-grounded theme. Teens' narratives were coded as such when they reflected specifically on the increased responsibility that pregnancy engendered and how it would change their lives. Several teens expressed their recognition of this by saying "You have to put the baby first, the baby before yourself or anyone else." The code, "Pregnancy changed me to a responsible mom," was gleaned from the following quote from Teen #739. She had recently experienced her first and only foster care placement and was living in a teen residence:

> Int: So, how did becoming pregnant change things for you?
> Teen: *It's separated me from being a kid, a teenager, to a mom, you know?*
> Int: How did you know that? How did you feel that shift?
> Teen: I felt so many different types of emotions and I been through a lot of experiences and I felt like, *it was time that I don't want to keep doing the same thing over and over. I want to see something new.*
> Int: So you changed your thoughts and feelings about yourself somewhat. And what new feelings were you experiencing?
> Teen: *Positive, like a new chapter in my life.* I stopped getting into a lot of arguments. I stopped feeding into what people were like provoking me. Um…I just backed away and I lost a lot of friends.

Teen #658, residing with a foster parent, noted that pregnancy in a way relinquished her from the egocentrism of adolescence in that it "wasn't just about her any more" and poignantly, reflected on the permanence of motherhood:

> Int: What changed for you when you became pregnant?
> Teen: Hmm, more responsibilities. Um…Like it's not about me no more, you know, it's not about me being a teenager no more, you know. Getting up when I feel like it. Now it about my health and the baby, the appointments,

> to check on the baby and, you know, and when the baby's born, I got to, you know, get up and feed the baby, take care of the baby, taken a bath, wash the bottles. It's not like before, you know, I took care, you know, I helped my mom with my two siblings…*And, you know, I used to just give them right back to her, but now I got to keep this one.*

Teens also reflected on how pregnancy altered not just their behaviors, but their feelings and identity. Subthemes in this study included how pregnancy changed teens' thinking, enhanced their desire for a better life, and captured attachment as a feeling and a goal.

Pregnancy woke me up. About 70% of teens explicitly stated that their pregnancies "woke them up to a new way of thinking." Quite a few quotes supporting this and the four subcodes that follow were also coded for reflectiveness. Teen #741 noted some global changes in mindset, "Call it less angry, less mad. I try to be…to stop thinking so much about like the bad stuff and think about the positive stuff." Teen #901 noted that despite her overwhelming adversity, pregnancy made her think differently about herself:

> So before I got pregnant I was strong but since I became pregnant I became even stronger. My mindset is different. My mentality is different. My view of things are different. My aspects are different. *Everything is just different.*

Teen #485 reflected on how becoming pregnant influenced the things she noticed in others, and what it meant for her as a new mother:

> Teen: But pregnant…getting pregnant at a young age was never the goal, I guess 'cause I had a goal in my life. But I feel like it's *really opened my eyes and…and it's helped me see things differently.*
> Int: How has it changed your thoughts?
> Teen: *I never thought I could be a mom. I never thought I could do it. But when I look and I see…I see how I want kids to be treated. Like I see kids out here and how they're acting crazy and I'm like, I want my kid to be different. I want my kid to be better than me.*

Stopped fighting and arguing. Although there is a dearth of literature on pregnant teens and fighting, it is not at all unusual for inner-city teens in particular to

engage in physically violent behavior, often to ensure their survival. Six teens in the current study had histories of fighting which interfered with their lives and relationships, and which they often stated they stopped when they found out that they were pregnant. Teen #743 was one such interviewee:

> I have a behavior problem though. Like, I like…I used to like, I still do, but now that I'm pregnant, I calmed down because when I was little and younger I used to fight a lot and get suspended from school. So. And I'd…when I was in like…My whole plan before my pregnancy was moved out the way, I wanted to be a pediatric nurse. *But, the high school I was in for that Clara Barton High School for Medical Professionals, it didn't go so well. I was getting suspended every other day.* So…I changed school…Yeah, I fight.

Although her narrative was not organized, possibly indicative of unresolved trauma and disrupted attachment (Fonagy et al., 2002; Lyons-Ruth et al., 2005), later in the interview she expressed how well she was doing taking care of her unborn baby in that she stopped "fighting and yelling." Teen #485 also described her tendency to "stand up for herself":

> Int: Did you get into fights a lot?
> Teen: *I got into fights. Now it's like, I don't feel the need to have to fight anybody.* Unless you put your hands on me, there's no point in having to get…I'm not going to argue with you…I don't like arguing.
> Int: So since you became pregnant you…
> Teen: *Yeah, so like, I want to do good…to be a good role model for my son*.

Caring for My Health to Care for My Baby: "Getting My Act Together"

There were many quotes that provided support for this code, which described teens' behavioral changes upon learning of their pregnancies. Teens expressed their growing awareness of the importance of behavior change for the sake of their health as well as that of their infants, and described how they did this. Many of these quotes were double-coded, first for the kind of changes that teens made, and later for reflectiveness, a harbinger of resilience. For the most part, the question asked was, "How do you think you're doing taking care of yourself and the baby?" followed by, "What are some of the

things that you stopped doing, or started to do differently when you became pregnant?" Some teens, like #901 made succinct comments, "my plan right now is to make sure I'm healthy and stay healthy," while Teen #686 stated, "I'm taking better care of myself and staying healthy and like I'm eating right, not doing anything bad." Teen #487 discussed changes she made in her health for the sake of the baby, involving diet, exercise, prenatal care, and stress reduction, and the importance of each of these:

> So that kind of changed and um…certain decisions I had to make, you know, being pregnant, I had to…honestly I just had to like change my eating habits. *Because I'm not eating for me anymore. I'm eating for someone else*. Um…my health habits. Make sure that I exercise, go see my doctor every time I have an appointment. So and try to not argue or be stressed all the time because when I'm stressed, the baby's stressed. *So whatever I'm feeling, the baby's feeling*. So that's how I changed.

Teen #132, when asked how she was doing taking care of herself during pregnancy provided advice regarding behaviors to avoid and stress reduction; giving advice was the avenue for many of the more transcendent comments:

> What advice would I give? I would give them the advice to keep their head up. *Don't let stuff get to you cause it's hurting your baby.* Eat healthy. Don't have sex with *anyone* else besides the partner that you conceived that baby with, 'cause you don't want to catch something, and, you know, you're pregnant. 'Cause then your baby will *have* it. You could probably get rid of, but your baby will have it. So, follow your heart also.

Teen #527 reiterated many of the health lessons she had received from her NFP nurse:

> I think I'm doing good. I know that I drink water more and stuff like that. Like I tried to change certain things in my diet and my health that I know is better for the baby and stuff like that. So like…and my nurse gave me a list of the stuff that I shouldn't eat. That I could eat. So I try to stay away from the stuff that I shouldn't eat as much as possible.

Stopping Bad Habits: "Harm Your Baby and you Harm Yourself"

Eight teens specifically discussed unhealthy behaviors that they had stopped engaging in when they found out they were pregnant: smoking tobacco and marijuana,

drinking, and eating fast food. For example, Teen #527 spoke broadly about changes she had made, including smoking, stating "I just used to smoke occasionally but I stopped completely." Teen #317 notes that she "stopped drinking caffeine and eating a lot of junk food." Teen #901, with the most extensive trauma and foster care history of all the teens interviewed, recounted her "stopping" certain behaviors with pride and in context:

> I'm actually doing excellent. Um…before I got pregnant I was a heavy smoker. I never imagined myself to be able to quit smoking cigarettes. Um…I was smoking cigarettes since I was ten. I could smoke a pack within two days. Within a half a day. Um…marijuana I could smoke a quarter, um within two days. A day and a half. When I got pregnant, I automatically stopped smoking cigarettes. And cigarettes are very addictive. Very. *So for me to be smoking, yeah, for me to be smoking for 17 years [sic] and to quit up like just cold turkey, was something that was very, it was a strength for me.*

Participant #497, whose early pregnancy was fraught with doubt, stated:

> When I was 3-4 months pregnant I was drinking a lot. I felt disappointed by myself. I thought I was gonna have an abortion but couldn't go through with it. I was upset and stressed out and was drinking a lot. One day I ended up in the hospital—I thought I was having a miscarriage. *But you harm your baby you are harming yourself. The baby's heartbeat was good. The baby's good health changed me, some lady there talked to me and changed my mind and I decided to keep the baby. I stopped drinking, I stopped going out.*

Feeling into Attachment and Love: "It's About Us"

An important code for the study in general was "it's about us" reflecting attachment and love for the unborn child. Teens who made spontaneous declarations of attachment and affection toward their unborn infants explained some of the conscious thinking and feeling behind these scores, stating that love was more important than buying the baby things and that spending time with their baby would strengthen their bonds. Teen #132, who despite experiencing major attachment disruptions had an attachment repair with her grandmother, stated:

> Don't let people push you in different directions. Stay with what *you* think is safe for you and your baby. *It's always you and your baby.* Your baby relies on you. You have to make sure when your baby is born, you have to make sure that your baby is safe, *and that he feels comfortable and that he can trust you*. If you have a nurse like mine, she would tell you how you would keep your baby safe and him trusting you. Like when he is crying, when he's one month, you will let him cry for one to two minutes. And if it's two months all the way to when he's six months and he'll complete ten minutes, so you let him cry. Cause if you let him cry for a little bit, and he is ensured that…*he knows you're gonna come and pick him up, he will build trust, that there's trust and comfort with your baby.*

Teen #557 had a good deal to say about the tone, feeling, and outcome for children who have a mother who is a "caretaker" and not a mother figure:

> It's not always about being a provider, like, my child is going to need, you know, comfort and you know, *I feel like it's more than buying him stuff. I need to be able to hug him* and he needs to be able to know that he could speak to me and talk to me and, you know, be open…

I'm against abortions. The theme of abortion was common; several teens recounted past experiences with and feelings about abortion and reactions to other family members who attempted to influence them to end their pregnancies. Teen #143 affirmed she would advise others not to terminate their pregnancies, noting "everything passes—a bad situation, but nobody will return a child to you, and it's a blessing…you'll see." Teen #650 stated that the lowest point in her life, and she had experienced many low points, was an abortion she had two years prior and described the impact it had on her:

> I wouldn't say get an abortion because abortions they still affect you, you know, and there's not much support that you can get from it because nobody can really understand what an abortion does to you. You know what I'm saying? You could talk about it and talk about it but at the end of the day some females like myself, *you can't really just talk about it and just get rid of it, you know. I really feel like I had to have a baby for me to feel better.*

Teen #487, whose father had left the family and had a new partner and children, had described her sadness and grief over losing her father. She recounted her feelings upon hearing him suggest that she abort her pregnancy:

> And he recently…when he first found out I was pregnant, he told me to get an abortion. *And I really got emotional because if you're telling me to get an abortion, what were you telling my mom when she was pregnant with me?* And I told him on the phone, I started crying, I was telling him that, that wasn't…that wasn't even the first choice in my head when I first got pregnant. Like I wasn't even thinking about that. I'm against abortions. I just…I don't understand how you can kill a baby…cause the baby didn't ax to be here. Don't take it like, if you don't want the kid, at least put it up for adoption. That's the best thing to do. *But just don't kill the baby.*

Despite the positive and transcendent views expressed by teens, there were several who expressed fear and consternation at becoming pregnant. Most qualitative studies that confirmed the positive impact of pregnancy also found that teens expressed some fear and concern, not just about becoming mothers but about how their pregnancy might derail their plans and separate them from their friends and from typical teen activities.

Supercode IX: Pregnancy: Stress, Sadness, Loss

About 25% of teens felt stressed or depressed by their pregnancies, but 65% noted ways in which pregnancy would interfere with the normal activities of their teen years and that they would advise other to wait to "finish school first,". These particular teens also had positive things to say about their pregnancies, although not as rich and varied as teens who did not feel stressed or saddened. The subcodes that supported this theme, "Felt unprepared, stressed and depressed," "Rethinking/ losing friends, fun, school" were less grounded than the codes that supported positive thoughts and feelings. None of the teens that made few positive comments about their pregnancy wanted to get pregnant (70% overall said that the pregnancies had been unplanned), and all teens in this group had mixed emotions when they learned of the pregnancy.

Teens who experienced cumulative ACEs also noted that they had lost friends, given up on work, or were stressed, but proportionately reported more positive changes

accompanying pregnancy than teens with less ACE exposure, which was not entirely surprising as many saw the pregnancies as a means to reword their own childhoods, thus claiming an envisioned future state. Hence the teens who reported experiencing few ACEs were *more* likely to state that they regretted becoming pregnant. For example, Teen #359, who lived at home with her mother and was not a strong "reflector," when asked about school, replied, "I stopped going at all, at some point I stopped going cause, I don't know, I didn't feel good."

Not Feeling Ready to Have a Baby: "Stressed and Depressed"

In this study, eight, or about 35% of teens reported feeling stressed by, and depressed about being pregnant, most often during the early stages of pregnancy. It is not possible to discern here whether the support given by teens' NFP nurse, or others (FOB, family) provided a counterweight to perceived stress for those who did not experience it, and would be an area for further study. As an example, Teen #621 discussed feeling trapped by her pregnancy in the context of her very religious family, like there was "no way out":

> Teen: *I did have a lot of emotional problems*. Cause a lot of times that when four months, I didn't want to have the baby, I wanted to abort. I don't know why. I didn't want to have it. And then my mom…she talked to me and my mom would say, that because we're Catholic…we don't believe in abortions. And then I don't know, I just thought that there was no way out.
> Int: So how were you feeling then? What was your emotional feeling?
> Teen: *I was just…just stressed, sad, lonely.*

Teen #581 had remarked that she came to understand her aunt's feelings about her early pregnancy, now that she was to be a young mother, stating, "Yeah, I felt like she was doing the wrong thing, because she was so young, but I understand her more now":

> Int: How so? How do you understand her more?
> Teen: First I think when I first was told that I was pregnant, *I felt like sad. Very*

> *depressed. And I cry because of my own. But it seems the time passed, I felt like my baby moving and felt more happy about it.*

Teen #901 reported having a conflict with and disappointment in her baby's father, and her reflection on her emotional state:

> *And then when I found out I was pregnant, I was, I was depressed. I was down cause I knew that my outcome…what my outcome is gonna be like especially with my daughter's father.* I knew that, you know, it wasn't going to be as it used to. It wasn't going to be…'Cause everything was just gonna change dramatically. Um…right now I'm dealing with emotional trauma. Um…even though I don't tell my doctors that and I tell them, like you know, I'm not depressed, even though I tell my social worker no I'm not depressed. Hey, I'm not having suicidal thoughts or anything. *But, I am overwhelmed. I'm stressed. Um…I am depressed because, you know, it feels like I'm going through this by myself.*

Losing Fun, Friends, School: "I Had to Give It Up"

Given that these were teens, it would seem natural that they would feel the intensity of the losses that accompany early pregnancy. About 65% of teens noted these losses here. Teen #901, who had engaged in a good deal of drug use with friends, described how and why she lost these friends once becoming pregnant. While she sounded wistful about the loss of her popularity and renown, she stated, "I didn't have my priorities straight." Teen #487, an avid dancer, remarked on her disconnection from this part of her life:

> I did contemporary, ballet and hip hop. And so when I found out I was pregnant, it kind of hard on me because I can't dance for awhile…Well, I know once, you know, I have the baby I can always go back. *But I was kind of a little sad cause I'm usually up around the house dancing. And everything.*

Teen #523 noted that she was relegated to the outside of her social circle:

> Teen: Yeah, I feel like I lost a lot of friends.
> Int: You did. Can you say a little bit about that?
> Teen: *Because everybody does what they want to, so I'm pregnant I can't do what they do anymore. Can't…I can't hang out with them as much.*

In an unusually pessimistic passage, Teen #621, living at home with her family noted that she had to give up on much of what she had hoped for, including her Quinceañera:

> *I think that I'd have changed, maybe getting pregnant at this age. Because I don't feel like I'm ready, like I was too early.* And then I could have done other things. Like have no more life, give up on school. Could have done, you know, I was going to do my 15…And then at the time I didn't do it when I wasn't pregnant yet and I could have had like, you know, achieved it by August, but I didn't…

Several teens (about 30%) also indicated the aspects of their lives that would have to be placed on hold, with a focus on school and work. Teen #523 expressed a strong desire to help her mother as they had been living in considerable poverty and were now in a shelter. When asked about this she replied, "I don't think anybody is going to hire me eight months pregnant." Teen #581 displayed a sense of resignation about pursuing school and work, stating, "I wanted to work and keep studying but I can't now." Teen #650, who was 19, stated that she "knocked school out" but wanted to work, noted the response from potential employers:

> And they don't tell me…oh, your pregnancy is a problem, 'cause they're not supposed to. But you can tell that it's a problem because I'm basically going to work for like one and two months and then go for maternity leave, so…

I'd say wait, because it's not easy. About one-third of teens stated that they would advise others to wait to have a baby. The reasons ranged from the arduousness of pregnancy to the importance of school and following an "expectable" path. Teen #523 stated, "if they have a chance to avoid getting pregnant, they should because it's not easy at all." Teen #143 stated simply, "I wish I would have waited to have the baby." Teen #658 was very clear on what she would say if asked to give advice:

> Finish school. Don't have boyfriends early, I think. I think is the best way, you know, to advise other girls. Finish school, don't get pregnant early, it'll be…I'm not saying *it's going to mess up your whole life, a baby is a blessing like I said,*

> *but I think you need a…you'll stop being a teenager. They will consider you as an adult already. A mom. Yeah. So…*

Teen #743, who was generally somewhat concrete in her responses, was thoughtful when asked what she would advise others to do, and offered several reasons why she would propose waiting to have a baby, although this quote was also indicative of attachment:

> *I would advise them don't become pregnant. Yeah. I think if you trying to get pregnant I'd say stop*. Especially at a young age but even though I'm going to be 17…I mean 18 next month…*it's still work. Because I don't only have to think about myself now, I think about my baby, too. It's not just about me anymore. It's about us now.* Yeah. Kinda wait till like you get like 20, in your twenties or many 20 going into 30. Yeah, cause when you're in your twenties you have to finish college. So, yeah.

In sum, it would be somewhat surprising if teens did not remark on or feel saddened by the limitations that pregnancy placed on their lives. Many of their comments, particularly when asked what advice they would give others were sage reflections on the increased difficulties they would face even in the context of being pleased by the pregnancy. The teens who were stressed and depressed by their pregnancies, given the impact of high stress levels during the prenatal period on fetal health and the association in this data to generalized lower mood states, were of concern. Out of the eight teens who reported feeling stressed and depressed about or during their pregnancies, five also experienced depressive mood states over time. Most teens, whether they felt stressed by their pregnancies, also expressed a good deal of resilience. Reslience was highest among the teens with the greatest amount of ACE exposure and the most positive perception of their pregnancies.

Supercode X: Resilience Beliefs

Analyzing the narratives of teens in this study helped distinguish resilient from non-resilient teens on the basis of their self-representations. The narratives were coded

for self-representations of resilience after taking note of the differences in the degree of introspection, agency, planfulness, relatedness, and optimism in the narratives of these teens. Most of these teens provided evidence for believing that they can adapt to and affect their immediate environments and futures. Interviews were coded for exemplars of resilience along with the content of the code. Examples of this are described below.

Expressing my Autonomy: "Striking Out My Way"

Autonomy is the conviction that one has *agency*—that what one does matters in the world. This theme was split into three subthemes: "I don't want to follow your/any rules," "asserting myself—striking out for independence, my way," and "asserting myself—setting goals, ensuring my future." The latter two codes were often co-coded with "envisioning a hopeful future."

Not following your rules: Some teens stated clearly that they did not want to follow the rules set down by others, not for the sake of being less dependent/more independent, but because they wanted to rebel against what was being forced on them, for better or worse. This theme may have been an augury for greater empowerment in their futures. For example, Teen #743, who had experienced multiple moves in and out of foster care explained why she wanted to leave a particular foster home, but with some insight:

Teen: I didn't want to stay with her no more, and that's when my grandmother had took me from the residential.
Int: So can you say what was happening with your foster mom that you didn't want to stay with her anymore?
Teen: She used to force me to eat carrots, in my oatmeal! I don't like carrots in my oatmeal!
Int: So that was why you didn't want to stay with her?
Teen: Yeah! And she also wake me up early for school. I hate getting up early. I didn't want to get up early.

Int: So she was trying to wake you up early and make you eat carrots? So you didn't want to stay with her anymore.
Teen: *Yeah, (laughs) I was a kid.*

Teen #751 described her reaction to a new foster parent, which underscored her aversion to following the dictates of others:

> Yeah, it's alright. Now, really like, I don't really like people like telling me what to do and she's always, like trying to tell me what to do. *I know what I'm supposed to do but I don't like people telling me what to do.*

Striving for independence: Teens made general statements about doing things their way, whether these "ways" were defined or not. Sometimes they capped off such quotes with "I was hard headed, made mistakes, but that's on me," acknowledging of responsibility for these choices. Teen #751, in a foster home, thought about her next move and made such a statement, also indicative of the prior subcode:

> I plan on…I haven't really made it too clear…'cause I actually wanted to, like it's just so hard I want to sign myself out of the system when I'm 18. I just plan on going in the shelter and *just doing it the hard way hard way, 'cause I feel uncomfortable having to live under somebody's house and somebody's rules and they feel like they always in charge of me*. I'm in their house.

Teen #557 discussed her distant relationship with her mother in the context of her desire for greater independence:

Int: So what stopped you from being as close as you once were?
Teen: When I started to, I guess, rebel in her eyes. And I stopped being dependable for her. Like she stopped needing to depend on me, I don't know if I'm using the right word. Um…she stopped needing to depend on me as much because I wanted to have my own life. I was around 16, you know, and I was just tired of always being in the house with my mom. I was tired of having to come home…straight home from school and clean and cook and go to the store and walk the dog and…Just do things that I didn't feel was fair. You know my 26-year-old sister lived in the house and she didn't do much and…
Int: And so it kinda fell on you.
Teen: Right and then once I got a job, I started working for myself and started making money, it's like, I have to give you money? And then I have to take care of the house and come straight home from school? So we started

> to bump heads a lot because she wanted me to be there and I didn't want to be there anymore. So I guess…she puts it as I was being a teen. I just see her as, you know, we were being too overbearing, so…

Visualizing a better future: Teens emphasized the importance of making plans and of maintaining motivation and the sense that caring for one's self was possible, even against the odds. About 40% of teens made statements like this. These quotes were notable for the sense that teens could affect their world, and the actual planfulness and ideas about how to create these futures were also coded in the theme, "Planning for security". For example, Teen #132 had different ideas about how to best affect her world and her status at present, which involved improving her credit and financial status. She declared:

> I don't have credit. So I'm trying to build credit but it seems like nobody wants to build credit with me. So, I don't know…'cause if I could build up my credit…like my aunt messed up all her children's credit. So now my cousin…my grandma's second favorite, he has extremely good credit because she's been paying them back whatever, you know? And he has so much credit, he could buy a house, like you know. Like, you know, you need credit to do stuff. So…that's what I'm mainly…yeah.

And lastly, Teen #485 remarked on an internal process, in a way a kind of sea change she experienced prior to becoming pregnant that revealed a sense of agency at another turning point, being detained:

> And I think it was after that I was like, *OK, this is completely unacceptable. I have to change everything I do. When I go home I have to have a plan. I can't keep doing this cause I'm not going to keep coming back to these places.* It's not fun. Yeah. Cause I know once you turn 18, they're not going to keep sending me to these juvenile delinquent homes. They're going to send me to Riker's Island and I don't want that. *And I needed to get my life together.*

Maintaining Optimism About Life: "I Always Have Hope"

Things can get better: About 70% of teens in the current study expressed hope that the future would "turn out OK," and that they would be able to "make the best of a

bad situation" and "take what life throws at me." In this case teens seemed to feel that the future could work out for them, and spoke optimistically about their ability to be a role model and a good parent even in the context of "doing it alone," a very common theme in related studies. Teen #751, who coveted her desire to finish school and saw it as an entryway to a more positive life, stated, "I always have hope. Cause I have a lot of ambition. I don't give up on what I really want." Teen #143 was certain that things would work out, "I just got derailed with pregnancy, but I'm still going to achieve everything." Teen #497 expressed her general optimism directly:

> *First off, stay positive*. Because if you're not positive you're going to bring yourself down and you get like…you just move forward and anything that happened to you, just think about your baby and yourself, and, you know, *stay motivated just by your baby.* Yeah.

When asked what advice she would give other pregnant teens, this quote by #487 captured both general and parenting optimism:

> The best advice I could give other young women is even though you're young and you had a baby at a young age, don't let no one tell you that, "OK, your baby your life is over." 'Cause your life is not over. I've been told that by a lot of people that my life is over and my life is not over. *My life is actually beginning because I have a baby now and I have to learn how to, you know, be that mother…that role model for my baby and have to learn that I have someone depending on me and someone that's looking up to me now*. So…Yeah, don't let anyone tell you that your life is over. Always be positive. Live your dreams. Do what makes you happy for you and your baby.

Affirming Parenting Optimism: "I Can Be a Role Model"

Many teens expressed their desire to be a role model, often in the context of recreating a positive version of their early years by doing things differently than their own mothers and "raising their kids right", another widely supported theme. Teen #485 had an adversarial relationship with her mother and a violent one with her brother but a

close, supportive relationship with her father which persisted over time and from which she drew a model of the kind of parent she wanted to be. She said:

> Just don't give up, you know, if there's stuff that you see that you like to be implemented in your kid, drill it into them. You know. *Make sure your child's a good person. Do your best. Cause not all the time your kid will come out the way you raised 'em. But if you do your best, you can't say that you failed. You didn't fail, you did your best.* My…my dad always put it into me to be a good person and my mom did, too. She did. She always had, you know, do the right thing always to…she had weird ways of doing it, but she was always, you know, trying to be on top of me and make sure I was a good kid. I turned out a little different but that was on me. But they raised me right. So you just make sure you raise your kid right, if you raise your child right, you've done your best cause that's all you can do…*Like I see kids out here and how they're acting crazy and I'm like, I want my kid to be different. I want my kid to be better than me…yeah, so like…I want to do good…I want to be a good role model for my son. I don't want to tell him to do something and then do it and be a hypocrite.*

Teen #901 also expressed a strong desire for a "reworking" of her early life and her dedication to giving her daughter the life that she did not have:

> I want my daughter to be healthy. For her to live the life that I never was able to live…I never had a childhood. So I would want her to have a childhood. I want her to be able to play with Barbie dolls until she's 12. I want her to be able to, you know, take dance lessons and do stuff that I was never able to do…Um…but, learned not to trust no one with my child (laughs). To listen to her as she gets older, you know, if she's having problems to actually listen instead of just half-assed listen and not do nothing. I learned a lot of patience. I learned that now that I'm pregnant I have to be a role model to her. I can't do the things that I was doing in my past, cause it's gonna affect her.

Distancing from Dysfunction: "I Can Keep Myself and Others Safe"

A theme that emerged throughout the data surrounded teens' views of themselves as protectors—of themselves, of others in their lives, and of their babies. Teens reported that they felt capable of protecting themselves and found ways to create scenarios where they felt safer than they had been. In the present study, teens utilized the advent of pregnancy to protect themselves and their infants from further physical and developmental harm by ceasing dangerous behavior.

Promoting safety for myself and others now: Teens made an association between being sexually abused and wanting to enhance safety in their environments and also to protect others. Teen #621 spoke about how being raped by her uncle at 13 changed her, and said, "Stop dreaming and wake up, make sure nothing else happens to no one, your sisters or brothers." Teen #485 discussed how she wanted to utilize her experience of being sexually abused to help others:

> And that's why I wanted to become…want to become a counselor…for teens and females who've been through it *because I want them to have a place to come to where they feel safe.* Or other girls who've been through it or if you don't feel comfortable being in a group then you can have individual sessions.

Teens who experienced severe neglect, such as #132, and verbal and physical abuse, like #751, also discussed this desire to protect. Teen #132 began talking about how her survival strategies had worked for others:

> I learned how to work with it, how to…you know. I'm saying, "I'm doing the same thing I used to do when I was little, survive by myself," you know. *And then when my sister came along, survive, make sure me and her were good…and then my brother came along, they say he was good and safe for he felt loved.*

Protecting my child from danger/bad influences: On this note, several teens expressed how they would protect their babies and described what they wanted to prevent their child from experiencing. Teen #650 noted her own "abandonment issues and resentment towards my parents" and concluded, "I don't want my child to go through that. So it motivates me to be careful who I have around her." Teen #132 discussed having to live with relatives, and that it was not a safe or clean environment for her baby, stating "So my mainly concern is just the baby. Like I just want…I want him to know that he's safe, in a nice clean environment, you know." Teen #751 considered her own

abusive parents a poor influence and wanted to prevent her child from seeing them, and her concern about a rift this might cause:

> I want to make sure that he's always in school. That's why when he gets older he always stay in school. *He's not really around so many bad influences. I want to keep him away from my parents…'cause they always have nothing but negative stuff to say.* But I do want him to know my little sister. And I don't think they would allow that.

Teen #485 transferred her desire to protect and help others to her unborn child:

> Cause I…my biggest fear at this point is having a female. Having a girl and *having my girl go through the stuff that I went through*. So I want to be mentally prepared for all of that. Yeah. *And I will tell her, you know, everything that I've been through and keep her aware.* I know sometimes it doesn't work, but sometimes it does.

Planning for Security Through Home, School, Work: "Making it on My Own"

The majority of teens were intent upon securing their futures in several arenas: school, finances and material needs, and in particular, housing. Nineteen of the 23 teens, or 82% expressed an understanding that they needed to begin preparing and a desire for assistance in more than one of these arenas. These teens were self-motivated and tended to believe in their ability to affect positive changes through their own ideas and plans, and/or through help-seeking. Pregnant and parenting teens, mainly those without family support face a plethora of challenges to their basic safety and well-being.

I just want to have my own home: Few teens expressed a desire for only one form of assistance. They conveyed the most concern over housing, which underscores a significant barrier to teens' success as mothers. Almost all teens, except those who were cared for by their families expressed a strong desire for assistance with increasing their residential stability and permanence. The responses of 15 teens were coded for this theme, grounded in a total of 24 comments, exceeded only by "caring for myself to care

for my baby." Teens expressed a desire to find stable housing not only to feel safe but to strike out on their own as "head of household" as Teen #132, interviewed in a park due to the chaos where she was currently living, expressed. Some who were not particularly reflective, like Teen #743, stated that they "just want to have my own house, my own money so I don't have to ax anybody for anything" The teens who were in the most tenuous situations like Teen #650 whose mother was volatile and threatening, Teen #878, who was homeless, Teen #743 who had no idea where she would be living, and Teen #557, living in a residence that would require her to leave once her baby was born, were the most concerned; an example of such concerns came from Teen #557:

Int: What things are happening in your life now that you wish you could change?
Teen: Honestly, (chuckles) *the only thing I feel like I need the most help with is my living situation.* And I'm not going to worry about finances because I'm very spiritual person like I've been saying and I feel like God always makes a way *but I guess I don't have much faith when it comes to where I'm going to live in the next month. So.* Yeah, that's the only thing.
Int: So what…I know the people here are trying to help you a bit, but what kind of steps are you taking?
Teen: I'm working. And I'm trying to save as much as I can to prepare myself for the situation that I may not be able to get out of. So…

She later noted:

Teen: I think I'm doing a lot better than…than I expected. I just need to give myself more credit for it.
Int: How do you think you're doing better than you expected?
Teen: Well, like the first time I was pregnant I didn't…I had no idea where I would go, like I wasn't educated. I didn't…I had just came from my high school so I feel like *I've made steps to educate myself and to get myself into places where I can grow and places like I got myself as opposed to just saying, nobody is going to help me, going to be there for me.*

Teen #132, who had been handed off to multiple family members was focused on the safety of her child's living situation. She mulled over the chaos in her boyfriend's house

and stated that regardless of how much she preferred to be with him, that she would rather move back to her aunt's house:

> Because it's not stable enough for me to live there. I don't want my kid there. And they're arguing and fighting, you know? It's like his brother and sister. The sister's 14 and his brother's 18, he just turned 18, so he's crazy out of his mind. And I don't like all that stuff, you know? And they're dirty and I have to clean up after you. *For all that I could live by myself, me investing in this house I could do something by myself.* So I plan to get rid of them all. That's my plan. Moving in there. Yeah, move in, and be happy and go to my favorite place when I was little.

Finishing school is number one: This group of teens was focused on their education. Most teens in the current study, about 70%, stated that school was always a focus for them and that they wanted to finish school and go on to post-high school education. A handful also stressed that they were always passing currently and doing well. The teens often had very specific plans for themselves to pursue higher education, while acknowledging the logistical difficulties they might face. They also discussed their pursuit of education within the context of planning for their future. A concern for several teens also fell under the rubric of protection, as they expressed some unease about who might be available to provide day care. For example, Teen #497, after stating that she would finish school and in this way be different from her mother, said, "I want to start this nursing program in college, have a job, by then to try to like, you know, get in my own apartment." Teen #168 stated her plans, which included school, succinctly:

> Finishing school. That's the most important. Trying to get a summer job so I can save up for him. Hopefully me, keep up with school, go to community college, get a decent career and take care of him.

And Teen #658, in foster care due to truancy, reflected on the impact of her status and her aspiration to finish school. She reported from within a sociodemographic context of "never having seen that" in her family, and a desire to avoid perpetuating this:

> Because, you know, it affected me now because, you know, I see people in the streets, that, they don't went to school like, and they just in the street doing nothing and I would like…to finish, you know, because I'm young still and because I want to show my baby, I want my baby to grow up educated and, you know, finish school, go to college whatever. *I never seen all that but…*

On the other hand, Teen #317, who lived with her mother and stepfather, expressed her uncertainty, stating, "Um…I'm going to try to finish high school. I really want to but, I don't know, we'll see how that goes." Teen #359, born outside the U.S., expressed her plan to finish high school and yet had realistic uncertainty about attending college in the context of financial constraints and her immigration status, stating "I don't think I'm going to go to college because it's too much money and since I'm not from here, you know, more difficult for me."

Working toward financial/material stability. About 55% of teens were concerned about employment and being able to enhance their financial security. Some had vague plans about "wanting a job" and others had outlined specific plans for themselves. They also acknowledged the difficulties they might face when applying for jobs, due to their current status. Teen #523 noted that she "wanted to do night school and get a job," and Teen #686 responded with few preferences, "like I can always apply for a job and like they give me a job like, you know…" Other teens' plans were more clear-cut and it was evident that they had thought these plans through. Teen #901 had some specific ideas:

> Go back into school in September. If I can. You know, because I'm going to have the baby and stuff. But I was…if I'm not, I'm going to take courses for home health aide and I was told, um…I was talking to a guy and he told me that with home health aide I don't have to um…have a GED or anything. So um…if it comes…I'm gonna get my GED when I have the time. But I know that I'm going to need money. *So…(laughs). Um…once my daughter's here if I do not take my GED courses, I'm going to start the training for home health aide and from there*

> *start working as a home health aide nurse. And eventually get my GED and hopefully if I start school in September hopefully I can start college in January*.

And Teen #739 stated:

> Yeah!…I would like to…I turn 18 on January 30th and my due date is January 10th. And I would like to get my OSHA card and work in construction. Yeah. I like…I like hands on rather than sitting behind a desk and filing paperwork for the rest of my life. Yeah and then from there I get more licenses to do more things and the construction sites 'cause you know you need a license for holding the flag or for different things, you know? And I would like, that's something that I like to do. *You know because I was already motivated but like that motivates me.*

Almost 50% of teens expressed the need to prepare for the baby materially and were concerned that they did not have the necessary supplies nor the money to purchase them. The need to enhance her financial stability was stated clearly by Teen #557, who expressed her concern about her financial status, her apprehension about burdening her mother, and the lack of assistance she was receiving to care for her newborn:

Int: If you could have anything in the world, what would you want more help with?
Teen: Probably financially. More help with the baby financially. *Because I know my mom is always going to help but I don't want to put more responsibility onto her then she already ha*s. And even though I have a job, I feel that it's not paying me enough to take care of the baby.

Teen #497 expressed a similar sentiment, noting that she was a mother "in poverty," a phrase which was rarely if ever used by these teens, and expressed some enthusiasm:

Int: So, what kind of help are you getting now with these things?
Teen: Well, the Nurse Partnership Program and this other program where I'm starting, getting it, um, is called Room to Grow. *They give you things. So for mothers that are like in poverty, they're not like donated, they're like new things. They help you get things that you need for the baby.*
Int: What's that's been like?
Teen: Well, I haven't started yet. I'm going to start it this Friday. I'm a go over there and meet the person.
Int: Hmm, hmm. So how do you feel about doing that?
Teen: I'm excited (laughs) Yeah, I was excited when I got the call.

Relating to Others to Seek Help: "They Cared for Me, Helped Me"

Over 90% of teens reported the desire to connect to service providers and experience a compassionate connection as well as receive material assistance. Overall, this was a relational group. About 50% of teens responded in the affirmative that their NFP nurse was a source of support during the pregnancy, and that they generally felt support and compassion from providers.

Feeling support, compassion from providers: About half of the teens made statements that indicated their positive feelings about, and relationship with their NFP nurse and other clinicians or helpers they had encountered. With teens in foster care, these descriptions were quite rich given the sheer number of people they had come across and received assistance from and to whom they had told their story. Some teens, like #485, remarked that their NFP nurse "helps me the most." Teen #557 recounted a positive experience with a school counselor at a very difficult time, stating "when I learned to trust her she helped me learn a lot about myself." Teen #901 had her first encounter with adults that did not abuse her, in an RTC:

> Um…when I was ten I went to a psych ward. Um…from there I went to a residential treatment center when I was 11. Um…staff up there who were like mother figures but I wouldn't really call them my mother. *They would do my hair. Um…they never raised their voice at me. They never put their hands on me. But from the staff on that campus, and the RTC that I was in I learned a lot from looking at them and how they cared for us.*

Teen #132, who was not in care, waxed poetic about her nurse:

> *From the visiting nurses? Oh, my God. I love her*. Her name is J___. She says that I'm a comedian that died. 'Cause when she first met me I used be like mad sarcastic, about everything…That's how I am sometimes. She um…she teach me all this stuff like didn't know, like the…when I felt like a little heartbeat, that's him hiccupping. Um…when he burps, you know, you don't really know when he's burping or when he's crying. I'm like, he's crying inside of me, like I didn't even know that. She weighs me. She makes sure I stay in my weight limit. She

> helps me…she helped me find you guys, and then she gives me so much information. Like if I need, say I need food…she's like, "Here. Here's a list of food pantries." Here's this all this other stuff, like she gives me like, she gives me a person to talk to, you know*? I don't like to talk to her about my feelings and what I've been through and things but she…she makes…she's my therapist when I need her. If it's for me, the whole session, she said, "That's fine, because it's what I'm here for is to help." So I'm like, "OK." It's good.*

I want to know more: About 40% of teens reported that they wished for more parenting knowledge, and at times, emotional support. Teen #143, who wrote her responses, noted succinctly that she needed help with most things, "What to do when the baby is born, like bathing him, learning different cries, feeding. Things like that." Teen #581 said she "was taking classes to know more information about childbirth." Teen #621, a proponent of counseling to help other teens cope with pregnancy, opined:

> I would give…the advice I would give would be to get counseling, to have someone to talk…to not feel like because of your age, you feel like you can't do it. *Because to have babies a really…make strong, it's a strong decision. And it changes your life.*

Teen #317, who was quiet, shy, and cared for by her mother, expressed her fears and lack of experience and her desire for more knowledge:

> Int: So tell me about the help you're getting now with your pregnancy?
> Teen: *Well, I have the nurse and she's been really helpful. She's been able to tell me about breastfeeding and how the whole giving birth experience is going to be and what I actually have to do.*
> Int: And how do you feel about meeting with her and learning from her?
> Teen: *Um…I feel good when she comes over. I feel like…we have a good bond.*
> Int: A good bond. Does it help you feel more secure or sure of yourself?
> Teen: Yeah. (sighs)

Reflecting on My Feelings and Experiences: "Looking Inward"

The ability to be introspective and reflect on one's own thoughts, feelings and behaviors as well as that of others became apparent as coding progressed, and all interviews were then re-coded for indications of reflectiveness. Some teens were able to

project into the future and perceive their infants as individuals with their own consciousness and not just beings with basic needs to be met. Teen #132 mulled over this, anticipating future family gatherings, “We have to greet the old baby first and to greet new baby so the old baby don’t get jealous, you know? So he doesn't, you know, don’t like the baby.” Teens who were reflective were able to contemplate their own inner processes and experiences, the feelings evoked when thinking about their past lives for the initial survey, and how their pasts affected them at present. Teen #485 reflected on how her past experiences shaped her:

> And then, all the years that I’ve been away from home, all the places that I’ve been to, all the people that I’ve talked to, it changed my look on life a lot, and I don’t care what people think about me. *I know who I am. I know who I want to be. I know who I was.* So I feel like I made…a lot of progress in my life, so, I felt at one point like, oh, you know, something’s wrong with me, because she don’t like me and nobody’s going to like me. *That’s my mom, she’s supposed to love me. But at this point it’s like, you can feel how you want to feel about me, I don’t…it doesn’t matter ‘cause I know how I feel about myself and that’s really what matters to me. I don’t regret anything that I’ve done, just because I’m proud of the person that I am today. I’m proud of the…I’m not proud of the stuff that I did, but I don’t regret it, because if I didn’t go through everything that I went through, I wouldn’t be this person.* So I don’t…I tell people I don’t regret anything. I don’t even regret that time that I met that guy on the internet because if I didn’t, I…don’t know who I would be, I don’t know where I would be and…*and I’m proud of myself. I’m proud of the progress that I’ve made in my life.*

Teen #557 remarked on her current emotional life as different from the past when she was feeling more anger:

> I feel less angry. I feel more reflective. On a daily basis I can reflect. And I feel…I feel like all of those experiences and everything that happened, happened for a very big reason. And that now and in the future, I’ll be able to see the results. I look forward to seeing the results.

Thinking about the past: At the beginning of the interview, teens were asked to talk about the experience of doing the initial survey. Some teens stated that it was “good” and that there was not much else they wanted us to know. This pattern maintained

throughout the interview for these teens, who for the most part, continued to reflect little on their internal process or their lives. The teens who experienced the greatest amount of adversity were consistently the most reflective. For example, Teen #650 responded to the query that she was glad because the interview findings "would be used to help young mothers and help others understand what they go through." Teen #485 responded with a comment that not only explicated why the "concept" of the survey was good, but from a broader perspective—she felt it helped teens understand how their life experiences could affect their pregnancies and feelings:

> I like it. I think it's…I think the whole overall concept of the interview (survey) is really good. I look on how women should…well, *teens should view pregnancies and things that they went through in their lives and how it affects the pregnancy and how they feel about their child.*

Teen #168, with an extensive ACE and foster care history and many environmental stressors, responded:

> Int: So, how has this interview experience been for you so far?
> Teen: It's been good.
> Int: Hmm, hmm. Can you say a little bit more about why…why it's been good for you?
> Teen: Well, I just like talking about my problems and having someone actually agree to me and stuff.
> NAP: Hmm, hmm. You like talking about your problems…how does it make you feel?
> Teen: Better. Like, I just feel like a different person. Yes, and relieved.

"I wanted someone to love". This was one of the more pivotal subthemes that emerged from this data, bringing to light the process of reflectivity in a powerful way. At least 60% of teens discussed how they connected their pregnancies to things that happened to them in the past, or that they learned from and became stronger because of the profound difficulties and losses they had faced. Several of the teens who responded in this way divulged a connection between their pregnancy, or their decision to have the

baby, and things that happened to them—especially missing love or losing someone they loved. They reflected on their past experiences against a backdrop of several other themes—in particular, neglect and detention in foster care, harsh treatment from mothers, missing fathers, envisioning a positive, hopeful future, and introspective statements about their lives and the feelings of others. These responses, as they emerged, indicated a longing for connection and love. For example, when asked how she thought not having a father figure affected her in her life now, Teen #487 remarked:

> *It affects me in a lot of ways because you go out, and you're looking for that love, that male bond. You looking for that, you know, that love that you never got from your dad, you're looking for that in a man*. Or in a boy. And me and my boyfriend, we grew up without our fathers so we kind of connect and we understand each other.

Teen #739 connected the loss of a loved grandmother and her lack of a bond to her mother to her desire to have a baby, and said:

> I feel like they are [*sic*]. But I really just don't know in exactly what way. I just know that I want a positive life because I'm having a baby. And I feel like it did a little, cause now I *want a baby because I felt lonely and you know, I lost my grandma, and so like in some way I feel like it is affecting me*.…And ever since I lost my grandma, I was by myself so, I want to have my own kid so I can love my own kid instead of me trying to love my mom. *When me and my mom, never really had like a close relationship or mother and daughter relationship, so I felt like if I have another kid I'll find my love with my son, you know?*

I noted a difference between teens who had experienced significant adversity and those who did not in the ability to reflect on the past. This was gleaned from an analytic memo. For example, #359, who experienced little adversity and was still cared for well by her mother, stated:

> Int: Can you describe things you went through in the past that you think might be affecting how you are today?
> Teen: No. I don't think so.
> Int: So you don't think anything that's happened in the past affects the way that you are today?

Teen: Hmm, I don't know.
Int: No? So…what are things that are happening in your life right now that you wish you could change?
Teen: That are happening right now? Nothing, I guess.

"Don't stay in the dirt." Teens discussed how their rough pasts and experiences were growth-promoting, which in a sense provides evidence for the impact of adversity on their emerging resilience. The majority of teens who experienced multiple ACEs and stressors (over 80%) were able to reflect on behavioral and emotional changes, many in positive directions. With respect to the construct of "growing stronger," teens often reflected on the deficits in their lives. Teen #739 advised others who had come from rough childhoods like her own, "Like you didn't have love in your childhood, it should make you want to give your child what you never had." She used the metaphor "don't stay in the dirt," regardless of whether she was able to attain her goal:

> I just wanted to be a psychologist at one point but…you know that kind of stuff attracts me…being smart…bright, you know, intelligent. *No matter where you came from or, what happened in your past, if anything it should make you want to do better and instead of staying in the dirt.*

Samuels and Pryce (2008) in their qualitative work with pregnant teens in care noted that many of the girls they interviewed used the aphorism, credited to Friedrich Nietzsche, "What doesn't kill you makes your stronger." While discussing her abuse history in care, Teen #901's discourse was evocative of this mindset:

> They've um…they've made me very stronger. Um…when I talk to people about my past, I have a lot of grown-ups tell me, I don't know, one person like in their life, they don't know one person who would be able to put up with half the stuff that I dealt with and still be as strong as I am. Some people would have been broke down and, you know, all of this stuff.

General Findings – Domains Explored

This section begins by considering the above findings with respect to the domains discussed in Chapter three, and Chapter five will address the implications of these findings. The study inductively explored teens' perspectives on the meaning of their pregnancies, their prenatal health, and their attachment to their unborn infants in the context of cumulative adversity, and added to and supported prior qualitative literature in several notable ways. While previous qualitative work inquired about teens' views of their pregnancies and about their histories of adversity, few, apart from Kennedy's work have utilized CAD (Kennedy et al., 2010) and resilience theory (Breen & McLean, 2001; Kennedy, 2005) to highlight how accumulating ACEs and protective factors may affect teens' view of and behaviors during their pregnancies.

Positive Perspective on Pregnancy and Prenatal Health

The quote that exemplifies the core theme that emerged from the study was "*My baby changed me from a kid to a mom*." Teens were, with few exceptions, very positively disposed toward the concept of pregnancy and parenting and were changing their thinking and behavior accordingly. Past adversity seemed to foster a pattern of resilient beliefs and behaviors and the perception of pregnancy as a positive turning point. This finding was consistent with other studies (Aparicio et al., 2015; Breen & McLean, 2010; Kennedy et al., 2010; Maxwell, Proctor, & Hammond, 2011; McDermott & Graham, 2005; Neiterman, 2012; Pryce & Samuels, 2010; Rosengard et al., 2006). Teens also expressed strong attachment to their unborn infants, a finding that reflects prior literature (K. Bloom, 1995; Knight et al., 2006; Koniak-Griffin, 1989; Macintosh & Callister, 2015; Wayland & Tate, 1993). In this way, these young women, as Kennedy et al.

(2010), Freed and SmithBattle (2016), Rolfe (2008, and Samuels and Pryce (2008) noted in their work with similar populations, “defy expectations” about low-income inner-city teens, many of whom were in foster care. Barcelos and Gubrium (2014) postulate that teens’ discourse often takes the form of a redemption narrative, or a way to disavow the dominant standpoint that vilifies the teen herself: the “wrong girl” narrative explicated by D. M. Kelly (1996). Teens regarded the status of being pregnant as offering the possibility of what SmithBattle (2009) and Rains et al. (1998) refer to as “reversing a downward path” and Williams and Vines (1999), as “problem-fixing” within their own personal narratives of trauma, abuse and loss. In these studies, themes such as “stepping up to motherhood” (Shanok & Miller, 2007), “having a kid makes you grow up” (Rolfe, 2008), “wanting to do better than my mother” (Aparicio, 2016), and as Pryce and Samuels (2010) noted, “getting down to business” emerged from the data. As Duncan (2007, p. 308) notes, teen pregnancy and parenting may be “more of an opportunity than a catastrophe”.

These findings were notable for how teens’ beliefs and future templates differ from the more pervasive views of researchers, policy makers, and surprisingly, practitioners. These teens indicated, as did teens in prior studies, that they made positive changes to their health and began considering their life path and future security in considerably more mature ways when they learned they were pregnant. This was an important finding and the study’s impetus for determining factors that may co-occur with these positive changes. They were also largely bonded with their infants and expressed strong prenatal attachment. A series of patterns in the data, reflecting the initial domains

explored and others, shed additional light on both the risks and protective factors that may occur in the lives of teens who become pregnant.

Cumulative Stressors and ACEs

While some of these young women began life in a context of relative safety and predictability, about 80% of them experienced a rapid decline toward increased vulnerability on multiple levels with little to no influence over these experiences. This decreased stability over time took the form of multiple moves and in some cases, homelessness, and family dissolution as a result of parental separation or domestic violence. Adam (2004) investigated the long-term impact of family instability on child health and development. He found that both multiple moves and being separated from parents or parent figures and being removed to foster care, more common in low-income communities due to general poverty and increased surveillance have a cumulative, disruptive impact on children's adjustment over time. As Adam and Chase-Landsdale (2002) note, there is covariance between increasing separations from primary caregivers and teens' deficits in cognitive and emotional functioning.

A clearer sense of the accumulation of environmental and interpersonal psychosocial stressors, and of ACEs emerged from the study. These stressors included many factors that co-occur with entrenched poverty: multiple moves, shelter living, loss or disconnection from family members, being bullied, living in very crowded households, and having little emotional support. ACEs began early in life and were perpetrated for the most part by parents and foster parents. ACEs included all forms of child abuse, including physical and psychological abuse, material and emotional neglect, witnessing violence and alcoholism, and sexual abuse. While other studies found higher rates of

sexual abuse in the life histories of pregnant teens (see Gilson & Lancaster, 2008; Osborne & Rhodes, 2001; Saewyc et al., 2004), seven teens did experience sexual abuse at the hands of both relatives and strangers. Another scenario was removal to foster care, the vagaries of what happened to these girls before removal, and the highly traumatogenic interactions and events they encountered after. Eighty percent of teens experienced ACEs as children, with 49% experiencing at least three and 40% experiencing more than four ACEs. When maternal ACE exposure is low (i.e., ≤ 2), the incidence of unresolved attachment style is also low (less than 20%) and thus so is its transmission (A. Murphy, Steele, Dube, et al., 2014), which is relevant for this study.

Attachment Patterns

Most of the ACEs teens experienced, with the exception of experiences in foster care, could be subsumed under the rubric of traumatic or highly disrupted attachment relationships with parents or other primary caregivers. About 80% of teens reported such experiences; 75% of teens reported that their fathers were either absent from the family or harsh and violent and 60% reported that their mothers were not "mother figures", describing them as harsh, abusive, and/or emotionally neglectful. There was overlap for eight of these teens. These findings reflect evidentiary trends in the qualitative literature on pregnant teens, where mothers are reported to be emotionally and physically abusive (see Aparicio, 2016; Aparicio et al., 2015; Kennedy, 2005; Kennedy et al., 2010; Williams & Vines, 1999) and fathers, stepfathers and mothers' boyfriends are reported to be abusive and violent, or missing (Brand et al., 2015; Mashala et al., 2012; Kennedy, 2005; Kennedy et al., 2010). For eight, or 35% of teens, relationships with grandmothers compensated to some degree for these deficits. The eight teens who stressed the

importance of their grandmothers were almost unequivocally those who had no bond with their mothers. All but three teens though, stated they had some sort of early attachment relationship with a significant family member. This was either one parent, or a combination of a parent and grandmother, or in two cases, foster parents. Other studies (Aparicio, 2016; Aparicio et al., 2015; Kennedy, 2005; Montgomery, 2002; Rolfe, 2008) reported similar findings, but in this case, there was a direct connection between early disrupted attachment to primary caregivers and behaviors and feelings about pregnancy, and assuming a maternal identity. Many of the teens who described harsh relationships with their mothers indicated a strong desire to care for their infants during gestation and to engage in a reparative relationship with their future child, which also reflects the literature. The study comprised a small sample of young women and responses were somewhat uniform across the group. Although about half of these teens did not experience an accumulation of ACEs, few reported never having experienced a traumatic event and all had demographic risk. This was one of the factors that facilitated obtaining both data and theoretical saturation (Corbin & Strauss, 2015) and yet was also a limitation of the study.

Mental Health Problems

Teens also had lifelong struggles with their mental health. Teens with the most ACE exposure reported more mental health problems, not an unexpected finding. This concentration of mental health problems was consistent with the theme of higher ACE exposure in all cases. Nearly 80% of teens in this study reported clinical symptoms characteristic of C-PTS, including depression, anxiety, dissociative processes, intense anger, and PTS symptoms (e.g., intrusive fear, dysregulation), and a high level of

guardedness and shame. At least 50% overall had described three or more of these experiences. Within the highest ACE group, thus increased to over 80%. Teens experiencing shame seemed, as those experiencing abuse from caregivers often do, to adopt what Fairbairn (1943) coined the "moral defense." A child will take upon him or herself the "burden of the badness" and wonder, if they were "better children" whether their parent(s) would be less harsh. The symptom reported most often was depression at various times over the life course. This finding is consistent with the literature on depression in young pregnant women (Barnet et al., 2008; Campbell-Grossman et al., 2016; Chalem et al., 2012; R. C. Edwards et al., 2012, Figueiredo et al., 2006; Gavin et al., 2011), and commensurate with sample (Barnet et al., 2008) and population studies (Clare & Yeh, 2012).

Social Support

Another theme that emerged was the level of social support that teens received during their pregnancies. Teens have less social support than older women after giving birth (Sieger & Renk, 2007; Sommer et al., 1993; Zachariah, 2009), and less than they expected to have (Logsdon, Gagne, Hughes, Patterson, & Rakestraw, 2005, Quinlivan, Luehr, & Evans, 2004). In related studies, teens' families expressed ambivalence about these pregnancies and support fluctuated over time (Barnet et al., 1996; Kennedy et al., 2010; C.C. Knight, 2013). Social support is a major source of protection against the relational impact of ACEs (see A. Murphy, Steele, Dube et al., 2014) as well as post-partum depression, whether it is one important family member or a high quality therapeutic relationship. Connolly et al. (2012) found, in their metasynthesis of qualitative work that the teens their study who perceived their pregnancies and early

parenting experiences to be positive, reported receiving the either emotional support from families and clinicians, or financial support form other sources. Teens with solid support from the FOB and their mothers are less likely to experience depression during pregnancy (R. C. Edwards et al., 2012; Pires, Araújo-Pedrosa & Canavarro, 2014) and in the post-partum (Campbell-Grossman et al., 2016) and to feel more competent as new parents (Angley, Divney, Magriples, & Kershaw, 2015; Campbell-Grossman et al., 2016; Connolly et al., 2012; DeVito, 2010). Renker (1999) found that social support moderated the impact of physical abuse during pregnancy on birthweight, through prenatal health practices. She refers to Poland, Giblin, Waller, and Hankin (1992), who posited that social support attenuates the impact of prenatal stressors by communicating a sense of self-worth to a pregnant woman who, thus aided in her self-efficacy and esteem, will, improve her prenatal health behavior. (Campbell-Grossman et al., 2016; R. C. Edwards et al. 2012; Logsdon et al., 2005; Quinlivan et al., 2004; Ruff and Baron, 2012).

Teens must often piece together their support systems as in the current study, through what Logsdon et al. (2005) describe as a "patchwork quilt" of support. Teens in care have stated (see Kennedy et al. 2010; Pryce & Samuels, 2010) that the only positive sources of support they had experienced were from the helping professionals they encountered during their years in the foster care system. In the current study, most (17, or 74%) of teens had support from immediate family or the FOB. Nine teens described the support they received from the FOB, whether in the form of care and commitment or material support, or in a few cases, both (DeVito, 2010; Fagan, 2014; Mashala et al., 2012). There is considerable variability as to whether FOBs are willing or able to contribute to their children's upkeep and remain in a relationship with the mother. Factors

that may influence their involvement include maternal gatekeeping, prohibitions and expectations from the teens' female relatives, differing priorities and preferential activities, and their inability to contribute financially (Bunting & McAuley, 2004; Fagan, 2014), some of which emerged in the present study. Involvement from family and the FOB over time could be seen, as Howard et al. (2007) posit, as the accumulation of protection rather than risk. Thirteen teens had current support from immediate family members. Nine of these teens said they had strong relationships with their biological mothers (love, care) growing up, which augers well for their relationships with their newborns. Generally speaking, teens with early positive attachment figure(s), fewer ACEs, currently involved fathers, residential and emotional support from family, and connection to helping professionals would be better positioned to succeed as parents, complete and pursue their goals for their education, and obtain secure housing and employment. Determining the optimal algorithm for specific protective factors that are most effective in combination requires further research (Howard et al., 2007).

Resilient Beliefs and Behaviors

Resilience was not one of the original domains inquired about, but was an unanticipated theme that emerged spontaneously from this exploration. The narratives of many teens provided evidence that they were quite resilient: autonomous, optimistic, related, reflective, and persistent, and that despite the pile-up of negative circumstances were attempting to adapt in a constructive way (Brand et al., 2015; Neiterman, 2012; Solivan et al., 2015). Flanagan (1998) and Read (2000) noted that mothers from marginalized groups display, despite the limitations faced, resilience within the context of adversity, actively seeking safety for themselves and their children by utilizing internal

and external resources. As Hauser and Allen (2007), Masten (2001) and Rutter (1987) posited, surviving adversity may have a "steeling" or inoculating effect, and the resulting resilient beliefs and behaviors may reflect the interaction of innate characteristics and utilization of current external resources. These teens were determined to follow up on their plans while they were concurrently optimistic and strategic, yet anxious and in need of stability and continued support.

While the mechanisms through which resilience develops or operates to militate against the impact of adversity remain under study, Figure 4 presents a posited trajectory from early childhood, the kinds of adversity teens experience, internal and external resources, and the emergence of resilient beliefs at different time periods that might affect pregnancy health beliefs and behaviors. As in similar work (see Kennedy, 2005) teens in the current study made use of their resilience beliefs to maximize potential protective factors at the relational (i.e., family, FOB, friends, helping professional) and community (i.e., programs that can help) levels. This path fits within the conceptualization of an "influence" trajectory to illustrate hypothesized patterns of adaptive change and functioning subsequent to exposure to acute or cumulative ACEs and adversity (see Masten & Obradović, 2008). This focus on a pathway model is of course conceptual, as this was not a longitudinal study designed to acquire repeated measures over a life course, which as Masten (2011) argues, is a prerequisite for claiming an actual pathway of influence.

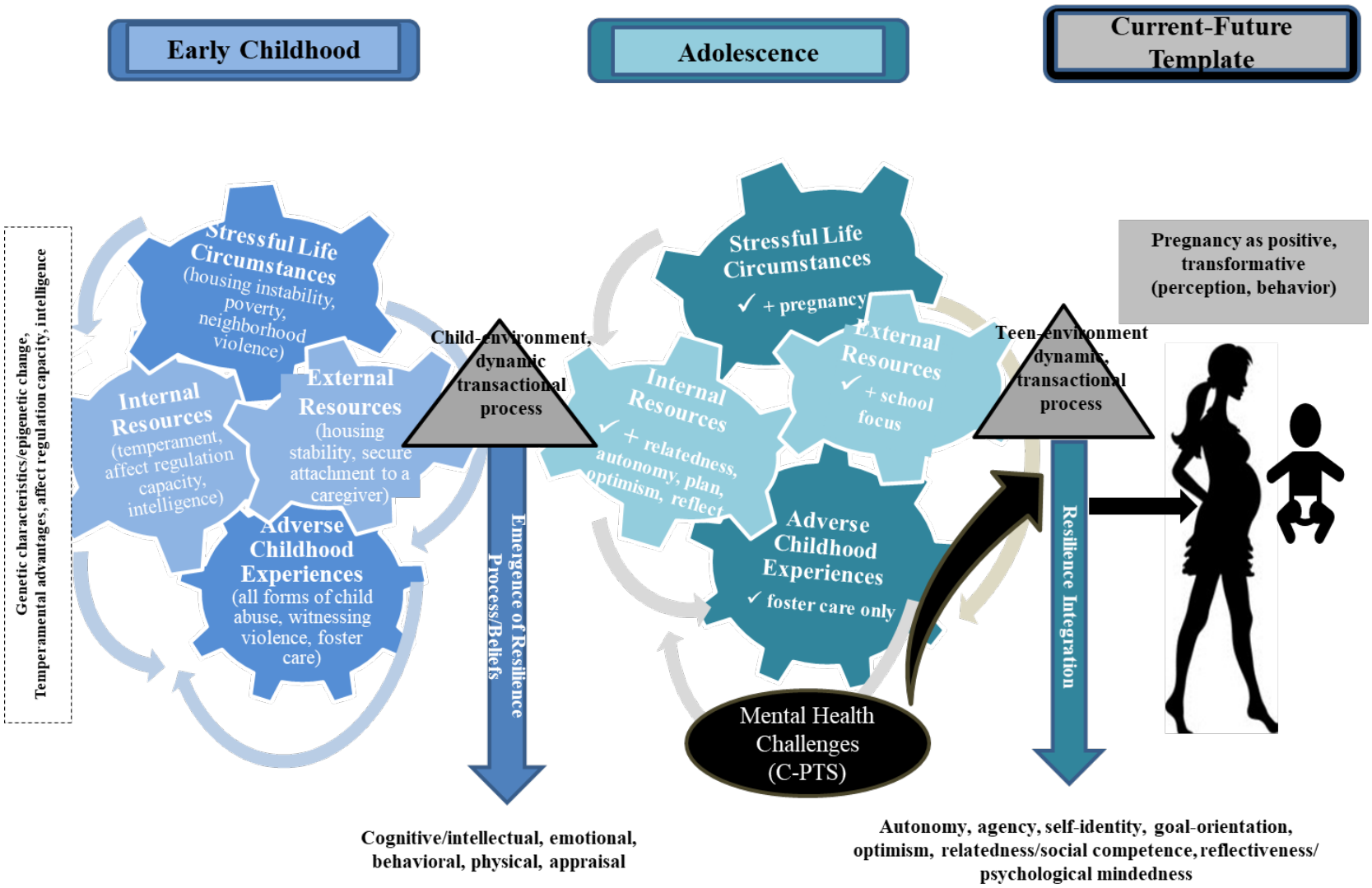

Figure 4: Proposed Resilience Trajectory. Adapted from "Factors and Processes Contributing to Resilience" by K. L. Kumpfer (1999). In M. D. Glantz & J. L. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations* (pp. 179-244). New York: Kluwer Academic/Plenum.

In Figure 4, a transactional process is proposed where a child's innate makeup: temperament, affect regulation capacity, intelligence, interact with external risk and protective factors: stressful life circumstances, external support resources, and ACEs, and foster an appraisal of the environment and the emergence of resilient beliefs about self and the world. Over time, traversing the teen years, these circumstances fluctuate to varying degrees and the adolescent we see before us in the present begins to integrate her internal qualities with environmental stressors and advantages, and solidify resilient beliefs and behaviors. The tendency to perceive pregnancy a positive, transformative event often co-exists with resilience (Black & Ford-Gilboe, 2004; Breen & McLean, 2010; Kennedy, 2005; Kennedy et al., 2010; Solivan et al., 2015). The relationship mental health problems and resilience is understudied, but did emerge in these data.

Herwitz (2003) and Ungar (2004) note that resilience in the context of adversity has its costs, particularly felt in the domain of mental health. This study revealed that resilient adolescents who do well under adverse conditions often experience, in a sense, a "side effect" of mental health problems, or, that resilience is not protective against trauma-related mental health deficits, a finding which reflected the outcomes of Luthar's (1991) study of 144 inner-city ninth-grade students (mean age of 15.3 years). Luthar (1991) found that depression, anxiety, and self-criticism were significantly higher among resilient youth (competent, from high stress environments) than for non-resilient youth (competent, low stress environments). In the current study, the code-by-primary document matrix revealed that about 50% of teens experienced at least three types of C-PTS and this finding did not exclude those who were most resilient. The extent to which teens reported experiencing mental health challenges did not vary directionally with

resilience or positive perspective on the pregnancy, but as a function of accumulating ACEs and stressors. These outcomes indicate that there may be a price to pay for resilience in the face of adversity, which has implications for programmatic responses to teens' stress levels and behavior during pregnancy even among the most resilient teens.

Negative Case Analysis

Single quotes made by specific teens that were not made by any other, and that were not reflected in the literature ended up being excluded from the analysis. These could be regarded not as disconfirming, but as discrepant evidence (Bazely, 2009; Bowen, 2008; Goetz & LeCompte, 1984) and did not refute the emerging theory by contradicting a theme but could be explored in future work. As Corbin and Strauss (2015) and Padgett (2008) note, searching for negative cases in qualitative research is somewhat analogous to a quantitative researcher's mindfulness of the null hypothesis. But if there is disconfirming evidence, does it have the power to refute an emerging theory and under what circumstances? Bazely (2009) and Lincoln and Guba (1985) note that qualitative studies cannot be expected to have no exceptions to directional patterns. For example, one teen mentioned a strict, cold grandmother, and another, a kind, benevolent stepmother, responses that differed significantly from others. While these responses could not be explored more in this sample, there were factors in these teens' lives that distinguished them and could be pursued in future research. In the first case, the teen described herself as rebellious as a youth and became highly autonomous, and in the second, the teen's father was warm and caring. Another example is "negative views of pregnancy", which could be seen as a potentially disconfirming case, but its

embeddedness in specific contexts encouraged us to search the data for explanations, which in the end refined our overall theory rather than disconfirming it.

One of the most interesting findings—what Charmaz (2014) termed a "lightbulb" observation—was that adversity, specifically ACES, distinguished two groups of teens. The more adversity a teen experienced, the more resilient she was and the more likely to rise to the challenges of parenting and express hope that it would pave the way for a better life. Whether these views and plans could come to fruition was less the issue for them than the hopes and plans themselves. As F. Walsh (2015) noted, whether a positive viewpoint regarding a salient life challenge is a "positive illusion" or not, it still provides the groundwork for the maintenance of hope. This hope however is buttressed on each side by past adversity and future potential support deficits. The following chapter presents a grounded theory with respect to these findings.

Chapter 5: Discussion and Implications

Developing a Grounded Theory Around a Central Theme: The Core Story

This study took the analysis somewhat further than others with respect to conducting "detective work" within the data to determine pathways of influence around the main finding. Bazely (2009) refers to this as moving from "garden path" analysis of themes to a cohesive model. To facilitate the development of a final conceptual model, I utilized data matrices to depict the thematic relationships around a central category. This approach adheres to the final phase of axial coding where a central theme, here, positive view of pregnancy and strong prenatal health and attachment, is highlighted and the relationships of other major themes to this category are organized (Charmaz, 2014).

These matrices yielded some unexpected patterns in the data. There were two subgroupings of teens, both of whom were positively disposed toward their pregnancies in perspective and behavior, but there were two different paths to the core theme. The patterns were discerned as it became apparent that each subgroup was providing a different configuration of responses. These configurations coalesced around teens' exposure to the *accumulation of ACEs*. One group had been exposed to three or more ACEs (n = 11, or 48%). These teens were highly resilient, were more likely to have adversarial relationships with both parents, and had more stressors, more mental health problems, less support, and less distress about being pregnant. The teens who experienced relatively few ACEs, i.e., two or less (n = 12, or 52%) were moderately resilient, had stronger bonds to biological mothers, fewer stressors, fewer mental health problems, more support, and more distress about being pregnant. Figure 5 depicts a model that illustrates the different patterns of responses between these two subgroups of teens.

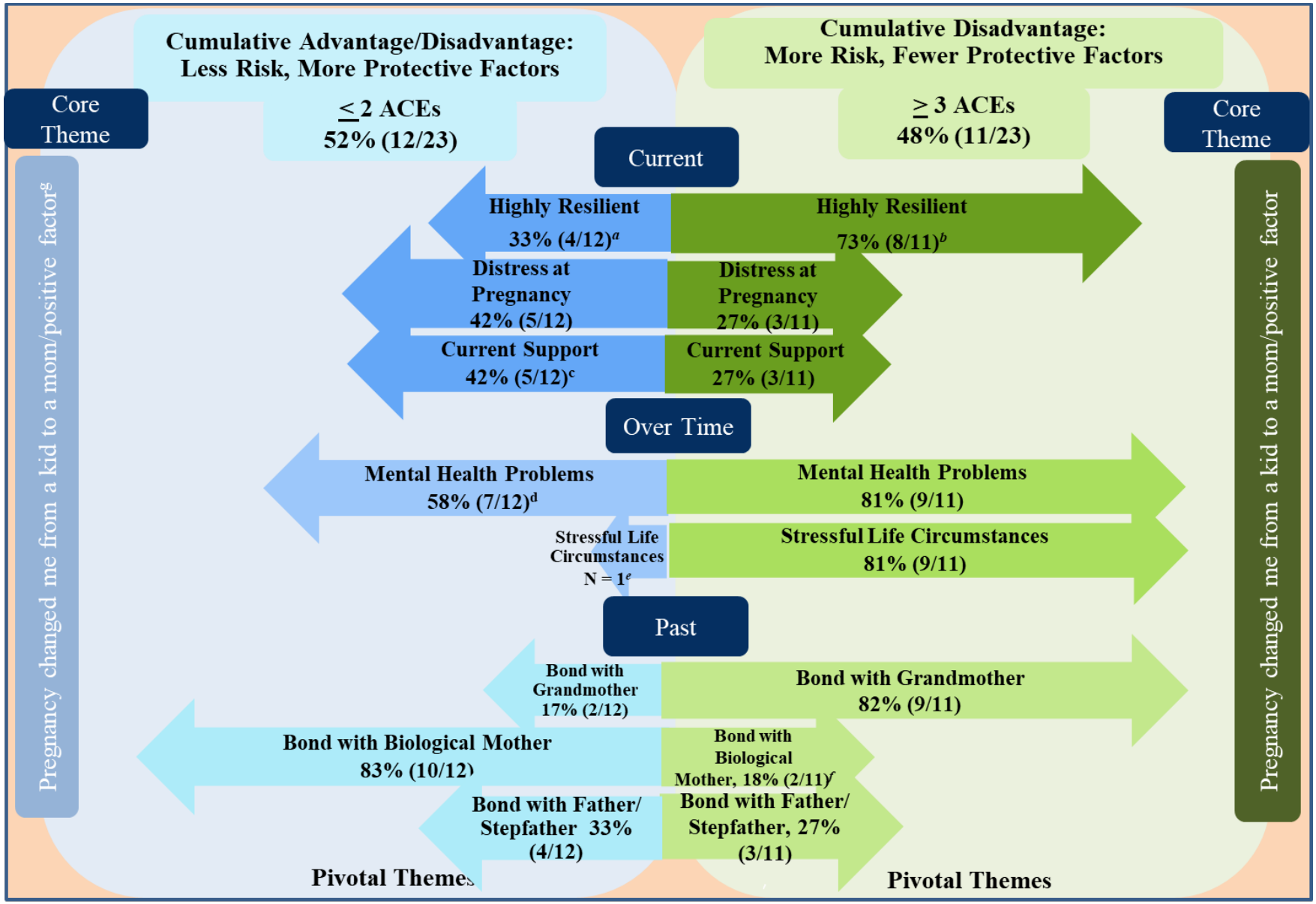

Figure 5: Teens' Positive View of Pregnancy in Psychosocial Context

Note: [a]Less self-protective, autonomous, reflective; [b]Four or more of six resilience factors, reflective; all but three teens (all low ACEs) planned for future housing, work; [c]Two or more forms of current support (FOB, family, friends); [d]Three or more mental health symptoms; [e]Five or more stressors, interpersonal or environmental; [f]54% (6/11), [g]lower density of positive comments (112); teens with ≤ 2 ACEs, 31/112 and teens with ≥ 3 ACEs, 81/112.

The majority of teens in this study feel very positively about their pregnancies and think and behave in resilient ways, planning to create a safe and secure life and strong bonds with their children. This resilient, optimistic perspective may have arisen out of the cumulation of adverse experiences and their desire to utilize their pregnancies to emerge from difficult circumstances. Through the current exploration, a grounded theory emerged of some of the circumstances under which teens perceive their pregnancies to be a portal to a healthier and better life, providing a picture of current resilience but also of vulnerabilities that should be addressed, through policy changes and programmatic enhancements that reflect promises made but not instantiated after The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) P.L. 104-193. What this study has revealed is that even if teens present as feeling and behaving positively with respect to pregnancy, this positivity is in a way "sandwiched" between the past and the future: a backdrop of probable serious disadvantage that often goes unaddressed, and a future where family support deficits and policy positions heralding funding decisions and programmatic responses may not aid teens enough in their desire to succeed as parents. The lack of availability and integration of interventions designed to ameliorate the impact of interpersonal trauma on parenting and attachment, and concrete resources to support them logistically might render them at greater risk for problems in parenting, which they are often blamed for in the dominant discourse, as they are teens.

In this small sample of pregnant teens who sought to obtain services to assist them, their psychosocial histories, emotional health, and available support systems all contributed to forming the person who presented for help. The teen may present as highly optimistic, with a positive view of pregnancy, health, and parenting, or, as in some cases,

she may seem unprepared and stressed. Interestingly, the most positive, motivated teen may also experience underlying stress and anxiety, and the least prepared teens may also be enthusiastic about becoming mothers and want the best for themselves and their infants. Gauging their level of maturity, responsibility, internal and external resources, and vulnerabilities to assess which teens may need the greatest amount of assistance may glean information contrary to their assumptions across the board.

The point to be emphasized here, is that it behooves clinical staff working with pregnant teens to avoid conjecturing based on generalities and entrenched dominant views and to engage in a dialogue with *each specific teen.* Service providers have been known to both relegate teens' observable resilience: a desired self, or a new and positive identity (Barcelos & Gubrium, 2014; Neiterman, 2012), particularly their optimism, to the realm of "fantasy" (Breheny & Stephens, 2007), or, to regard them as damaged as prospective parents due to their own histories of trauma, and in a sense, write them off. Several authors (Barcelos & Gubrium, 2014; Brand et al., 2015; Breen & McLean, 2010; Duncan, 2007; McDermott & Graham, 2005; Neiterman, 2015; Rentschler, 2003; Ruff & Baron, 2012; SmithBattle et al., 2013) assert, first, that teens should not be dismissed as "naïve dreamers", or hopeless as parents due to their past adversity. Second, they assert that narrative work within clinical settings helps to not only determine the life histories and current presentation of the individual teen they have before them but to understand that maintenance of resilience and desisting from risk behavior is possible, but requires maintenance over time from supportive structures. Figure 6 depicts this sandwich effect, whereas a teen may be buttressed by protective and risk factors past and present, and their apparent presentation may obfuscate their history and potential challenges going forward.

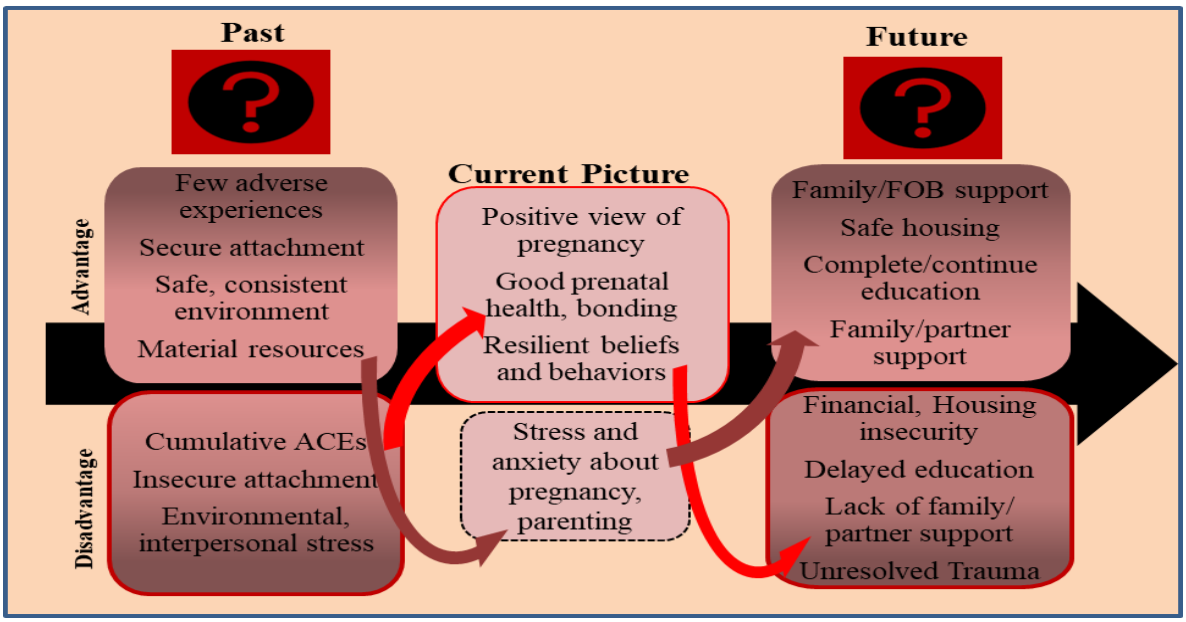

Figure 6: Teens' Psychosocial Support Structure: Past, Current, and Future

Practical Implications: Clinical and Programmatic

These findings of this study contain two specific clinical implications. The first involves an observable dilemma: the perception of teens through the "deviance" lens by the professionals designated to help them, and the discursive manner in which this perception may be communicated to teens and reinforced through collaboration with other professionals. The second involves the potential latent, unconscious consequences of the impact of cumulative ACEs on future parenting, where unresolved trauma and disorganized attachment representations may later be manifested in anomalous parenting.

Clinical Implications: Professionals' Pejorative Views of Teen Mothers

With respect to the first implication and under the rubric of the "deviance" discourse, Arai (2009), Barcelos and Gubrium (2014), Brand et al., (2015), Breheny and Stephens (2010), Duncan (2007), Furstenberg (2007), D. M. Kelly (1996), Rolfe (2008), SmithBattle (2009) and others, including Arline Geronimus (Geronimus, 2003; Geronimus & Korenman, 1993) who advances perhaps the strongest rejoinder, question

the prevailing standpoint throughout the developed world that positions teen parenting as inevitably calamitous. There is quite a disjunction in perception between workers and the teens themselves, one that can create significant roadblocks to collaboration and care. While all new mothers may be unprepared for the demands of a young infant, teens may need extra guidance and support as they may not know how to make use of external resources (DeVito, 2014). For some professionals though, they are perceived to be irresponsible, risk prone, self-involved and naive, and incapable of possessing good parenting skills (Breheny & Stephens, 2007; Duncan, 2007), prior to an in-depth understanding of their internal and external resources and sources of vulnerability.

Several qualitative studies investigate health professionals' tendency to promulgate these negative views of pregnant and parenting teens. Some of this work has been conducted New Zealand. For example, Breheny and Stephens (2007), using a social constructionist framework, conducted a narrative analysis with 17 New Zealand clinicians working with pregnant teens including midwives, doctors, and nurses. Most of these professionals had situated these young women through both a "developmental" lens where they were seen as ineluctably irresponsible and self-involved, and a "motherhood" discourse where a sort of faulty logic was applied: teens are inherently incapable of being good mothers, therefore any teen who becomes pregnant is by nature a bad mother. They report that these health professionals often framed the teens' behavior as "typical" developmentally and failed to recognize that they were evaluating teens' behaviors within a socially constructed treatise on "appropriate" parenting practices and normative expectations of adolescent development. They could position teens as "good" as they were able to provide affection and care, but "not good" as they were seen as incapable of

sustaining care when infants developed and had a mind of their own. In other words, clinicians did not recognize that teens could be good mothers as the "going got tough" but saw them simply as "dolls playing with dolls" (Breheny & Stephens, 2007).

Utilizing discourse analysis, the authors found that these health professionals used language which compared teens to much older mothers and reified the beliefs outlined above; these are paraphrased here: teens "lack maturity and confidence," "are too self-involved and wanting to smoke and party to attend parenting classes," "live by the seat of their pants and don't plan," "tend to eat only takeaways and other muck," "care more about lotto and nice clothes than things for the baby," "don't have parenting skills naturally," and "don't stop being teenagers just because they become mums" (Breheny & Stephens 2007), reifying the "wrong girl" narrative described by D. M. Kelly (1996). By locating young mothers as unequivocally distinct from and less able than older mothers, professionals may manifest these beliefs during interactions with them.

In a similar exploration in Canada, Rutman, Strega, Callahan, & Dominelli (2002) conducted a grounded theory study with 20 government social workers who worked with young mothers in the foster care system. They discussed their experiences, but moreover their attitudes and beliefs about the teens in their care in a focus group format. These workers held recognizable middle-class values and assumptions which formed the lens through which they saw these teens' mothering capacity, and had difficulty perceiving teen parenting as a transformative or health-promoting event. They were, as Rutman et al. (2002) noted, preoccupied with "stopping the intergenerational cycle" of teen parenting and regarded the teens' trauma history as an augury of intergenerational abuse. The workers *expected* infants born to teen parents to be removed, and communicated this with

quotes such as “I’m fond of her but she should not have had children,” “The girls haven’t been parented so they can’t be good parents,” and “The families were all so dysfunctional—they have no sense of relationships with anyone.” These comments confirm use of D. M. Kelly’s (1996) “wrong family” narrative.

What was different about the latter study was that these workers also saw that some teens grew into their parenting role and acknowledged that they utilized the pregnancy to positive effect, “Some kids had a pretty wild lifestyle and they see the pregnancy as a means to settle and stop doing drugs and working the streets and move forward.” They also recognized the barriers that militated against their ability to help the teens become good parents. One worker stated, “We are like pigs sniffing out truffles—we can sniff out risk but what tools do we have to help and support these families?” and another argued, “We focus only on protection and there aren’t policies in place to help the families,” and noted that this fostered removal of infants and fracturing of families. For both studies, health professionals saw teens as intrinsically inept rather than simply inexperienced and held pessimistic views for their parenting prospects, while teens found their pregnancies to provide a new sense of responsibility they were willing to pursue.

These entrenched negative views have been communicated to teens in both subtle and overt ways (Breheny & Stephens, 2007, 2010). Teens have reported that staff is insensitive (Cox et al., 2005), that they have been afforded insufficient access to the type of formal information that would lead them to reproductive care (Brubaker, 2007, DeJong, 2001) and that they are overly surveilled (SmithBattle, 2009). This “uncomfortable incompatibility”—views of helping professionals contrasted with the evidence from teens gleaned from qualitative work should be better utilized to inform

policy and programmatic responses to assist teens (Duncan, 2007; Graham & McDermott, 2005) and reduce the stigma that precludes availability of and access to both compassion and essential services.

Clinical Implications: Potential Impact of ACEs on Future Parenting

There are clinical implications to "what comes before" clinicians begin working with a teen in practice, whether through a nursing intervention, parenting education, or a therapeutic setting. Teens who become pregnant may not disclose the accumulation and types of trauma and stress they have experienced without first establishing trust and an alliance. Rentschler (2003) and Spear (2001) noted this in their qualitative investigations and argued that potential threats to good parenting (e, g., the impact of past trauma and current IPV, mental health problems, psychosocial stressors) should be assessed, recognized, and incorporated by helping professionals working with pregnant teens. In addition, these threats are not intrinsically age specific (Anastas, 2016). Numerous authors utilizing quantitative (Boden et al., 2008; DeRosa and Pelcovitz, 2006; Herrenkohl et al., 1998; Madigan et al., 2012; Mayer and Thursby, 2012) and qualitative methodology (Freed and SmithBattle, 2016; Kennedy et al., 2010; Renker, 1999; SmithBattle et al., 2013; Williams & Vines, 1999) among others discuss the impact of ACEs on teens' parenting. These authors state that histories of cumulative trauma are associated with dysregulated emotional states and may derail a successful early parenting experience. The impact of ACEs and unresolved trauma and loss can also impede secure attachment and maternal sensitivity in higher risk adult mothers, i.e., inner city women living in entrenched poverty (Martinez-Torteya et al., 2014; A. Murphy et al., 2014; A. Murphy et al., 2016; Schechter et al., 2008). A. Murphy and colleagues (Murphy, Steele,

Steele et al., 2014), discussed the findings from their work with clinical and community samples of adult women from very compromised communities; these findings provide support the outcomes of the current study and proposed clinical enhancements. They found a dose-response relationship between the number of ACEs these respondents experienced and the increased likelihood of Unresolved trauma and loss on the AAI. This classification is associated with disorganized attachment in infants (Madigan et al., 2006). A. Murphy, Steele, Dube, et al 92014) argue that the findings of the ACE studies have enhanced an understanding of the impact of childhood trauma on health and mental health over the life course, including parent-child relationships. Concurrently, the intergenerational transmission of early attachment patterns and eventual parenting quality has been well established in attachment research. The current study has integrated qualitative information from both lines of inquiry in teen parents-to-be. Integrating these two bodies of work has led to new ways of understanding the links between parents' experiences in their own childhood and the quality of the parent-child relationship with their offspring. The link between trauma and attachment research provides a solid rationale for including the ACE measure into comprehensive screening and treatment with vulnerable parents.

Selma Fraiberg (Fraiberg, Adelson, & Shapiro, 1975) coined the expression "ghosts in the nursery" to capture the potential influence of a parent's own abuse history on their own future parenting. As Malone et al. (2010) note, histories of abuse and/or neglect are "ghosts" that may emerge during the transition to parenting. There is some but not overwhelming evidence that women who experienced maltreatment will abuse their own children; rates of transmission in adult women varies as a function of

cumulative risk and the presence of protective factors (Dixon, Browne, & Hamilton-Giachritsis, 2009) and range from 7% (Dixon, Browne, & Hamilton-Giachritsis, 2005) to about 30% (Egeland, Bosquet, & Chung, 2002). With respect to teens, Putnam-Hornstein, Cederbaum, King, Eastman, and Trickett (2015) found in a population-level study (85,084 births to first-time teen mothers with children aged five or less) that children born to teens who had a maltreatment history, particularly between the age of 10 and the birth of the child were at significantly heightened risk (two to three times more likely than children of non-abused mothers) to have had a substantiated abuse or neglect report ($P < 0.001$), and remained so after controlling for other psychosocial risk factors. Aparicio (2017), Budd, Heilman, and Kane (2000), and Maxwell et al. (2011) argue that psychosocial stressors are at the root of these abuse reports. It is perhaps the confluence of past trauma and psychosocial stressors that accounts for more of the variance in these reports and that both of these factors are inadequately addressed.

ACEs and attachment representations. Prolonged histories of toxic stress and trauma can potentiate not only neurobiological changes in the stress response system that could lead to dysregulated reactions to current stress and impulsive behavior (De Bellis, 2001; LaPrairie, Heim, & Nemeroff, 2010; Shonkoff et al., 2012) but also, to an inability to *mentalize* one's own children. Fonagy et al., 2002; Slade (2005) discuss the vital importance of the *reflective function*, in which caregivers, usually mothers, are able to mentalize, or comprehend a child's emotional states by recognizing, digesting, and feeding back in modulated, regulated form, infants' emotional states. This function serves as a biobehavioral regulator of those states. A mother exposed to extensive adversity over time within her own family may be more tune with her own unconscious, unresolved

traumatic memory than her infant's needs and behaviors, and may be at greater risk for projecting negative emotional states on to her infant or reacting in anomalous, frightening ways (H. N. Bailey et al., 2007; Fisher et al., 2006, 2010; Fonagy, Steele & Steele, 1991; Lyons-Ruth & Block, 1996; Madigan et al., 2012; Moran, Forbes, Evans, Tarabulsy, & Madigan, 2008; Schechter et al., 2008). There is the possibility that unconscious memories of abuse, sexual abuse in particular, may manifest in what has been termed anomalous parenting. This can emerge as frank abuse, or subtler, disorganizing interactions between mothers and infants, setting the stage for the emergence of disorganized attachment (Lyons-Ruth & Block, 1996; Madigan et al., 2006).

Programmatic Interventions

For teens to succeed in the future, they need the kind of support that all new mothers with a lack of social capital and histories of cumulative adversity would benefit from, but older mothers often have built-in supports and advantages that pregnant and parenting teens do not yet have, often because they are teens and have been relegated to an outsider position (Duncan, 2007, Neiterman, 2012). The dearth of funding for and availability of interventions to support pregnant and parenting teens and increase their chances of being good parents is endemic nationally and there is much room for enhancement and improvement. This challenge can be viewed through four complimentary lenses. First and foremost, teens need more information about and greater accessibility to existing services. Second, is the need for an infusion of clinical assessments into existing programs to determine the level of risk to the relationship between pregnant teens and their fetuses, and between parenting teens and their children. Third, is introducing attachment and trauma-focused services and interventions into

existing programs. Fourth, is the manifestation of policy changes that would render programs to assist pregnant and parenting teens more accessible and supportive.

Enhancing Accessibility to Services

With respect to the first issue, we in the US could take a page out of the UK's playbook on teen pregnancy strategy and the creation of the Teen Pregnancy Unit (TPU), a product of the creation of Labour Party's Social Exclusion Unit in 1997 (SEU, 1999). The TPU has developed a two-pronged approach to teen parenting, one of prevention, and the other, enhanced support (SEU, 1999). Pregnant and parenting teens note the inaccessibility of services that could assist them and the complications and barriers they encounter as they attempt to locate and attain this help. They also report feeling surveilled and disapproved of; if services are perceived to be biased from the outset, it less likely that they will form therapeutic alliances (Graham & McDermott, 2005; SmithBattle, Lorenz, & Leander, 2013). The value of services designed to assist pregnant teens in their transition to parenthood and the connection to caring and involved adults is stressed throughout the literature. This has been demonstrated repeatedly with teens aging out of foster care—those who remain in care are less likely to have a rapid repeat pregnancy and generally do better over time (Courtney & Dworsky, 2006; Pryce & Samuels, 2010; Svoboda et al., 2012).

Trauma, Mental Health, and Attachment-Informed Assessment

The second issue involved an assessment of where a pregnant teen may be on the spectrum of ACE exposure, mental health challenges, and insecure attachment. In the current study, there was a co-occurrence in teens' narratives of the experience of maltreatment and of pregnancy as an avenue through which to halt the transmission of

abusive or neglectful parenting—to "do better" than their parents as Aparicio (2016) found, and to alter their behavior and choices accordingly to facilitate this. If teens have strong feelings of attachment to their unborn infants, they may engage in prenatal health behaviors that reflect this attachment. The question of what can happen when there is a living baby though, does persist. Do teens' convictions about good mothering and their overall positivity maintain over time, or are there threats to the prenatal bond post birth? As Aparicio (2016) and Dornig et al. (2009) found, teens earnestly express, as did teens in this study, a desire to enhance their relationship with their new babies—one in which they are good communicators and provide guidance as well as love, care, and protection, but that they may need help to ensure that this happens. A purposeful assessment of attachment status and ACEs would allow health professionals working with pregnant teens to determine which teens may be at risk from both an attachment and stress response perspective when the "going gets tough." The call for enhanced assessments of ACEs and PTS in teen parents has been heralded by DeRosa and Pelcovitz (2006), Freed and SmithBattle (2016), Mayer and Thursby (2012) and Williams and Vines (1999), who make the case to incorporate an enhanced mental health focus in general and Trauma-Informed Care (TIC) into interventions for pregnant teens including home visiting.

Some studies have in a sense capitalized on the high probability that teen mothers will have had disrupted attachment and ACE histories as an avenue to determine and minimize risk of intergenerational transmission of anomalous and/or abusive parenting (see H. N. Bailey et al., 2007; Lyons-Ruth & Block, 1996; Madigan et al., 2012; Moran et al. 2008; Ward & Carlson, 1995). As Freed and SmithBattle (2016) recommend, this can be incorporated into usual care with the ACE or a comparable survey, as Felitti et al.

(1998) did during their original study and supplementing with questions like those used in the present study: “How do you think these difficult experiences have shaped your relationships and well-being?” and “How do you think these experiences (will) shape the way you parent your own child?” (Freed & SmithBattle, p. 86). This information can identify teens that are at greatest risk for disrupted parenting as a function of “ghosts in the nursery” (Fraiberg et al., 1975) and conveys a desire to listen and develop a trustworthy alliance (Renker, 2002; SmithBattle et al., 2013). Along similar lines, Madigan and colleagues (2012) utilized an enhanced version of the AAI (George, Kaplan, & Main, 1996) to both assess unresolved attachment as well as maltreatment history in 55 high-risk pregnant teens. They found that 72% of their sample were Unresolved with respect to attachment, which is associated with anomalous parenting style (Lyons-Ruth et al., 2006). In addition, abuse reports (various types of ACEs) were very high, and there was a strong association between all forms of abuse, particularly sexual abuse, and this attachment classification.

As the current and related studies have shown, teens with ACE histories may have a more positive perception of pregnancy than adult women with similar histories, which may obscure the impact of trauma and traumatic stress on teens’ eventual relationships with their babies. The literature on the longer-term, post-natal effects of unresolved trauma and loss in teen mothers (Lyons-Ruth & Block, 1996; Madigan et al., 2006; Madigan et al., 2012; Ward & Carlson, 1995) portends a potentially less sanguine future, one that prenatal assessment and planning may preclude.

Trauma and Attachment-Informed Services and Interventions

The third and related enhancement is the introduction of trauma-informed services and interventions. The challenge here, as Elliott, Bjelajac, Fallot, Markoff, and Reed (2005), Harris and Fallot (2001), and SAMHSA (2016) argue, is to enhance existing programs, whether clinic-based or home visiting, utilizing a trauma-informed lens. They posit basic principles of trauma-informed services to bridge the gap between a philosophical approach, research findings, and practice, some of which are relevant here. Elliott et al. (2005) and Harris and Fallot (2001) posit, as does SmithBattle et al. (2013) that trauma-informed models infuse services from the point of entry with an empowering, collaborative, respectful, and resilience-enhancing approach, and strive to minimize the likelihood of retraumatization through rigid, culturally insensitive interactions or the communication of pathologizing views of clients.

Young mothers clearly need their stories to be told and to be heard by empathetic and caring adults and mentors (Breen & McLean, 2010; Freed & SmithBattle, 2016; SmithBattle et al., 2013). If the focus shifts from an individual, stigmatizing locus (e.g., there is something wrong/deviant about you for being in this position) to a more external locus (e.g., what happened in your life, how is it affecting you now), teens would likely benefit in their commitment to interventions to assist them, and in the transition to parenting. For most services and programs, adopting a trauma-informed approach would require a major paradigm shift which and involve a top-down integration of knowledge, enhanced assessments, and clinical interventions guided by best practices in the field, requiring organization development and training through all levels. This may be daunting

and would necessitate both major shifts in funding and commitment during a time when neither may be readily available.

Intervention models. Aparicio et al. (2016), Dornig et al. (2009), Freed and SmithBattle (2016) and Ruff and Baron (2012) make a convincing case for enriching supportive interventions for pregnant and parenting teens with attachment and trauma-focused interventions. With respect to attachment-informed intervention models, all young mothers need knowledge and guidance about how to interact with babies, but those without "good enough" parenting models need support to avoid anomalous or potentially disorganizing or abusive behavior. Two interventions involving moment-to-moment parenting coaching to enhance parent-infant mentalization and secure attachment are Attachment and Biobehavioral Catchup (ABC, Dozier, Lindhiem, & Ackerman, 2005), and Watch, Wait, and Wonder (WWW), N. Cohen et al., 1999). Both ABC and WWW are video-based. Similar programs, including an observational rather than video-based intervention, "Speaking for the Baby" (Carter, Osofsky, & Hann, 1991), were created for new teen mothers and is based on the work of Fraiberg et al. (1975). These programs provide a space for a mother to simultaneously interpret infant cues while exploring and expressing her own emotional reaction to those cues. They have the advantage of being psychodynamically-oriented and address the corollaries of unresolved attachment and early relational trauma. Mothers are assisted in understanding their infants' actual behaviors and what they may mean from a developmental and attachment perspective, instead of being influenced by "voices from the past" and projecting their own insecure attachment representations onto their infants.

Incorporating trauma-focused education and treatment when working with teen parents with ACE histories, teen fathers included, has been proposed by DeRosa and Pelcovitz (2006), the National Child Traumatic Stress Network (NCTSN, 2017), SmithBattle et al. (2013), and Williams and Vines (1999). This type of intervention has been utilized with teens, and mothers involved with the child welfare system who may be at risk for the transmission of abuse. The NCTSN proposes to enhance clinical interventions with ACE-type assessments, but also, manualized trauma-focused interventions intended for adolescents. These are evidence-based, and include Structured Therapy for Adolescents Responding to Chronic Stress (DeRosa & Pelcovitz, 2008), Integrative Treatment of Complex Trauma for Adolescents (Lanktree & Briere, 2013) and Attachment, Self-Regulation and Competency (Kinniburgh, Blaustein, Spinazzola, & van der Kolk, 2005). They are related, multi-module interventions designed to address C-PTS symptoms, particularly affect regulation and impulsivity in teens exposed to multiple ACEs. Two trauma-focused interventions are specifically designed for parents at risk. The first is Parenting Skills Training in Affective and Interpersonal Regulation (Cloitre, Koenen, Cohen, & Han, 2002) a 16-module trauma-focused parenting intervention that has been employed with mothers in the child welfare system (Chemtob, 2014). Another such intervention is Clinician-Assisted Videofeedback Exposure Session (Schechter et al., 2015), designed to assess and address negative maternal attributions toward toddler-aged children in mothers with interpersonal trauma history and PTSD.

A final suggestion involves assisting pregnant teens with their overall stress levels during pregnancy. Teens are known to have high levels of perceived prenatal stress (Barnet et al., 1996; Holub et al., 2007), and caring for a new infant is also stressful

despite its rewards. Perceived prenatal stress has been associated with adverse birth outcomes in adult, higher risk women (Bolten et al., 2011; Huizink, Robles de Medina, Mulder, Visser, & Buitelaar, 2003; Lobel et al., 2008; Thomson, 2004; 2007; Wadhwa et al., 2001; A. D. Weinstein, 2016; Latendresse, 2009). Holub et al. (2007) found that teens' prenatal and post-natal stress each independently predicted less positive feelings about becoming a mother and lower felt sense of competence as a parent.

Enhancing Home Visiting with a Focus on ACEs and Mental Health

An intervention that would benefit from a trauma-focused approach is nurse home visiting, including the NFP. Nurses, along with social workers, usually occupy the front lines when working with inner city pregnant and parenting teens (Freed & SmithBattle, 2016; Porr, Drummond, & Olson, 2012). Most public health nursing programs rely on nurses adhering to specific protocols. These programs have demonstrated effectiveness in supporting and enhancing the mother-infant bond both proximally and distally. But forging trusting relationships between helping professionals and low-income mothers, including teens, is the essential component that can reduce risk chains, assist women in reclaiming their identities, and in making choices which foster empowerment (Brubaker, 2007; Porr et al., 2012; Rolfe, 2008; SmithBattle et al., 2013).

Porr et al. (2012) and SmithBattle et al. (2013) focus on enhancing the mental health component of nurse home visiting programs for low income single mothers of all ages and for teens in particular. They argued that home visiting is a relationship first. Opening a dialogue between women receiving services and nurse visitors enhances trust, and allows nurse visitors to assess risk and new mothers to provide a narrative about their histories and their current challenges. Trauma histories are assessed less often than

current IVP in home visiting programs (Stevens, Ammerman, Putnam, & van Ginkel, 2002; SmithBattle et al., 2013). Investigations into the impact of ACEs on the outcomes of clinical interventions have revealed that participants with multiple ACEs may not benefit as much as those who have experienced less adversity, may have difficulty forming therapeutic alliances, or have higher attrition rates (Moran et al., 2005). Having a clearer sense of which participants have the most ACE exposure and current mental health symptoms may help direct appropriate resources to augment the likelihood of more vulnerable enrollees benefitting from and remaining in the NFP and similar programs, thereby improving their chances of positive outcomes.

Policy Implications: Pregnancy Prevention or Family Support?

The focus of policy positions to address the "problem" of youthful pregnancy as a cause of social disadvantage in the US and other developed nations has been to direct funding toward teen pregnancy prevention (Furstenberg, 1991, 2007; Lawlor & Shaw, 2006; Wilson & Huntington, 2006). This is evident in New Zealand with reports from the Ministry of Social Development (2002, 2004), the UK, with one arm of the TPU (SEU, 1999), and in the US, with stipulations PRWORA. Expenditures on teen pregnancy prevention are quite readily available (NCPTUP, 2017). Several funding streams, mostly through the USDHHS's Administration for Children, Youth, and Families coalesce to provide about $280 million annually, which reaches about 2% of eligible teens through education on abstinence and contraception. Unfortunately, in July 2017, the current administration all but eliminated finding for teen pregnancy prevention and research, rescinding a five-year grant to states that commenced during the prior administration, by $213 million (Burns, July 18, 2017). This decision, two years into the grant, aside from

the deficits it will cause, also precludes outcomes research on the effectiveness of programs initiated through this funding.

Outcomes of large scale longitudinal studies (See Furstenberg, 2007; Lawlor & Shaw, 2006) and reviews (M. Weinstein, 1998) include the finding that age at first pregnancy is not associated with extreme social disadvantage; rather it is pre-existing conditions, particularly entrenched poverty and lack of social capital that threatens outcomes for teen mothers and their children. The causes and consequences of teen pregnancy are part of a trajectory, and dominant views do not consider the unavailability of resources to the extent that they should. For example, NCPTUP (2013) clarifies its position by stating, "If more children in this country were born to parents who are ready and able to care for them, we would see a significant reduction in a host of social problems afflicting children in the United States." This statement refers to teens and also includes the "wrong girl" and "threat to society" narratives and contains an element of blame for "unfit" mothers failing as parents who are propagating social ills. The scientific literature centers to an extent on pathologizing teens who become pregnant on the basis of individual characteristics and membership in certain groups (e.g., racial, ethnic, income, adversity). Focusing on external resources, particularly enhancing stability, and interpersonal resources, enhancing psychological, familial, and professional support, shifts the focus from the "wrong girl" to the dearth of resources available to support her in her ability to parent (Graham & McDermott, 2005; Mollborn & Dennis, 2012).

Cogent position papers by Duncan (2007), Graham and McDermott (2005), M. Weinstein (1998) and Wilson and Huntington (2006) discuss the gap between quantitative and qualitative work regarding outcomes for pregnant and parenting teens.

Quantitative exploration is positioned as an exemplar of the scientific method and hegemonic discourse and thus a foundation for evidence. Qualitative work, capturing teens' insider perspective, sheds light on how the experience of pregnancy during the teen years may foster increased resilience and desire for positive change, whether in the short or longer term. These reviews shed light on how statistical outcomes for teen-led families have been shaped and promulgated in the public discourse as a calamity to foster a policy focus toward prevention. The qualitative research community is emerging as a potent source of findings to enrich perspectives on young mothers' resilience, particularly systematic reviews (Anastas, 2017, Clemmens, 2003; Connolly et al., 2012; McDermott & Graham, 2005; Spear & Lock, 2003).

I do not maintain the position that there are no risks to teen parents and their children above and beyond those of older women who have been exposed to cumulative adversity, particularly for the youngest teens, i.e., 14 years of age or less, whose pregnancies are more likely to have been a product of homelessness, coercion, or abuse (Andrews & Moore, 2011). It may be the case that aside from discursive "framing" of findings from quantitative studies, there may be factors that have not have been accounted for, including those that were of interest in this study. As Freed and SmithBattle (2016) note in their capstone work that followed a decade of exploration, the statistical likelihood that pregnant teens will have been exposed to cumulative ACEs warrants an alteration in perspective from both a policy and thus programmatic perspective: attention should be paid to addressing the mental health needs and psychosocial stressors commonly faced by pregnant teens, but that also affect women of

any age living in high stress environments (See Lopez et al., 2011; Seng et al., 2008) to support these pregnancies.

The Shortage of Housing for Pregnant and Parenting Teens

From the perspective of the teens in this study and others (see Connolly et al., 2012; Kennedy et al., 2010), the most significant problem they faced despite their overall optimism, good self-care, and desire to be responsible is that they were unable to acquire material resources and in particular, find safe, affordable housing as a "jumping off point" for themselves and their children to pursue their goals. The shortage of housing as a foundation for the future security of parenting teens is endemic (Hudgins, et al., 2014; Odell, 2017). Arai (2009), Furstenberg (2007), McDermott and Graham (2005) and Wilson and Huntington (2006) argue that funding directed toward teen pregnancy prevention rather than promoting the security and safety of young families in entrenched poverty is a palliative move and does not address the serious problems they encounter.

While over 50% of teens in this study lived with families or the FOB, these arrangements were not always optimal as teens lived in the lowest income areas in the city and had to share their homes with numerous other family members, findings that emerged from our fieldwork and recorded observations. The rest lived in an assortment of arrangements: about 17% lived in group homes or residential facilities, and 26% lived in foster homes. Many, over 40% reported living with five or more people but this could have included other young women in teen residences. Housing and then enhancing financial security were top priorities for about 85% of teens. They noted the difficulty in finding both "safe housing for me and my baby" and "programs to support us." This lack of housing should become a revitalized policy focus.

PRWORA and Implications for Pregnant and Parenting Teens

Pregnant teens are considerably more likely to be poor than are nonparenting teens; between 2009 and 2010, approximately 48% of all teen mothers age 15 to 19 lived below the poverty line (A. Y. Black et al., 2012; Kost & Henshaw, 2012; NCPTUP, 2010b; Noria et al., 2007). M. Weinstein (1998) noted that much of the panic over teen pregnancy, particularly during a period of declining rates is due to this association. Public views of teen parents are inextricably tied to their status as largely of color and poor and challenging the customary family structure (Barcelos & Gubrium, 2014; Duncan, 2007; M. Weinstein, 1998). Living with biological families is a protective factor: 34% of teen mothers residing with families lived below the poverty line, compared to 63% of those who did not. It is evident, then, why nearly 63% of teen mothers eventually will rely on some form of public assistance within the year after giving birth (Dye, 2008), including approximately 55% of whom received Medicaid in the first year and also the 30% who received food stamps. Within three years of a child's birth, 25% of parenting teens become welfare-dependent (NCPTUP, 2010a).

As noted in this study, teens who become parents may not have the ability to live at home with their families. They experienced overcrowding, potential conflict, or were asked to leave and may not have alternative arrangements. After "couch-surfing" fails, pregnant and parenting teens are vulnerable to homelessness (Andrews & Moore, 2011; HUD, 2000; Kennedy et al., 2010) and dependence on public assistance (Desiderio et al., 2010; Hudgins et al., 2014). A stipulation of PRWORA, within which teen pregnancy became a hotly-debated issue (M. Weinstein, 1998), mandates that minor teen parents must live with family members or a "responsible adult," which would include staff at

teens residences, in order to receive Temporary Assistance for Needy families (TANF), i.e., cash assistance. The alternative proposed was a funding strategy to create and maintain a series of teen living programs across the country, initially termed "Second Chance Homes." (n.b. this appellation can be interpreted as somewhat disparaging; one needs a second chance if they have done something society regards to be problematic). The principal focus was to protect parenting teens by requiring them to live in supervised living arrangements of some kind in the absence of family support to be able to ameliorate risk. Senator Daniel Moynihan (D-NY) first proposed legislation in 1999 (S.208) to provide funding for the concept—these were to be homes that would:

> provide custodial parents under the age of 19 and their children with a supportive and supervised living arrangement in which such parents would be required to learn parenting skills, including child development, family budgeting, health and nutrition, and other skills to promote their long-term economic independence and the well-being of their children. (HUD, 2000., Hulsey et al., 2005).

Second Chance Homes do not adhere to a single definition but include some underlying programmatic elements. They may take the form of a single group home or an apartment cluster or network. Common to all Second Chance Homes is an integration of services, either during pregnancy or following childbirth. Some offer short stays and allow residents to stay until they give birth—at least one teen in the current study faced homelessness because of this requirement; others offer longer stays. Several teens interviewed were in the process of looking for these arrangements due to problematic home environments. Services include: supervision, parenting skills, case management, assistance for the father of the baby, and if the teen wishes, reunification with her own family (HUD, 2000; Hudgens et al., 2014; Hulsey et al., 2005). They can also involve employment services, transportation, pursuit of education, and connection to other forms

of care (Andrews & Moore, 2011; ASPE, 2000; Odell, 2017). These services dovetail with what teens expressed would be most helpful to them in several qualitative studies (See Brand et al., 2015; Connolly et al., 2012; Rosengard et al., 2006; SmithBattle, 2007).

There is wide variation in how these homes are managed and funded. Funding comes from a veritable medley of sources and is of course the most critical issue. Operating costs vary depending on the structure of the home and the range of services provided, and the cost of living in the geographic region. There is little rigorous reporting on the long-term outcomes for young mothers residing in Second Chance Homes. The last report on funding sources and the effectiveness of these programs was released by Hulsey et al. (2005) for Mathematica; this was a very comprehensive report but it focused on the paradigm, not longer-term outcomes for the teen mothers. Andrews and Moore (2011) reporting on Second Chance Homes for Child Trends, note that most evaluations are descriptive and anecdotal, with information being provided from staff and residents. In my attempts to determine availability and funding for Second Chance Homes in New York City, three teen residences were located: Inwood house in Manhattan, Rosalie Hall in the Bronx, and New York Foundling, with sites in several boroughs. These maternity homes serve teens in the foster care system. Three additional faith-based residences were found in Brooklyn, the Bronx, and Staten Island. All had 20 beds or fewer except for Inwood house, with about 30, and faith-based homes required mothers to be over 18.

Funding structure for teen living programs. The Department of Housing and Urban Development (HUD) estimated the cost to support a teen mother and her child to be between $20,000 and $60,000 annually (HUD, 2000; Hulsey et al., 2005). The USDHHS and HUD are the two largest sources of federal funds for the Homes and are

distributed as TANF grants and the Social Services Block Grant (SSBG) (Title XX of the Social Security Act). States have had to be increasingly innovative to utilize TANF or SSBG funding to design programs that serve pregnant and parenting teens under this paradigm. The increasing decentralization that occurs with SSBG structures also makes it harder to evaluate the safety and effectiveness of these programs (HUD, 2000; Hulsey et al., 2005). These maternity homes receive about 20% of their funding from private donations. It is not possible to determine how much has been allocated by the federal government for teen maternity residences that meet criteria for effectiveness. Figure 7 depicts the highly decentralized sources of funding from HUD, USDHHS, and private sources, which renders tracking funds dissemination a challenge for social services agencies and certainly for teens themselves. In addition, many of the sources under HUD have their own specific eligibility requirements (USDHHS, 2000a, b).

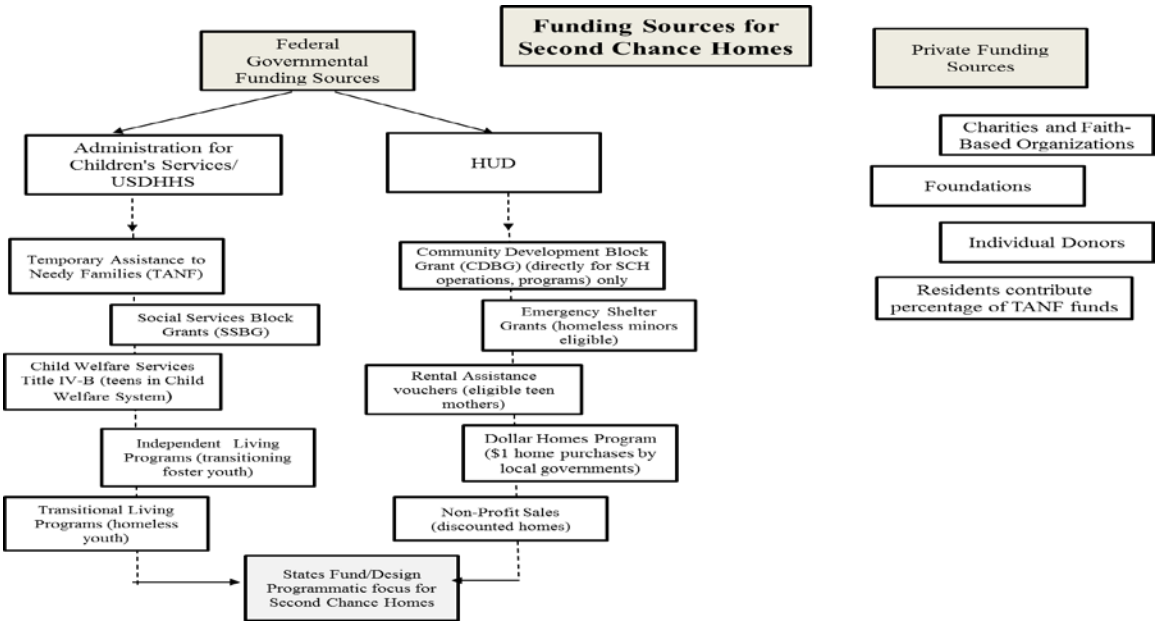

Figure 7: Funding Sources and Dissemination Scheme for Second Chance Homes. Adapted from U.S. Department of Health and Human Services (USDHHS), Office of the Assistant Secretary for Planning and Evaluation (2000a). *Second Chance Homes: Brochure*. Retrieved from https://aspe.hhs.gov/basic-report/second-chance-homes-brochure

Desiderio et al. (2010) reporting for Healthy Teen Network and Child Trends, describe the core components of an effective Teen Living Program (TLP) paradigm, whether deemed a Second Chance Home or otherwise. These homes should comprise the type of resources and staff support to promote teens' self-sufficiency, housing and financial stability, healthy interpersonal relationships and successful parent-child interactions and secure attachment. A broad internet search using several databases, Lexisnexis, PsychInfo, Social Work Abstracts, and Google Scholar, including the search terms "second chance homes," or "teen maternity home" or "teen maternity residence" or "teen living program" combined with "data", "statistics", and "states" revealed that data on Second Chance Homes is not available in New York State. Massachusetts has one of the largest TLP networks in the country, with over 20 residences (Odell, 2017). Georgia has had a successful program and the only one with recent outcome data (see Hudgins et al., 2014). These authors followed 556 teenage mothers accepted into these homes, 64% of whom were in Georgia's Department of Family and Children's Services. Study design was both pre-and post-comparison and where possible, comparisons were made with national data. Data was collected from each resident at intake, discharge, and three, twelve, and twenty-four months after the teen and her baby were discharged. Improvements from baseline were noted within all parameters of interest, including parenting, stable housing, financial status, and compared to national data, child outcomes and repeat pregnancies. Length of stay at the Home was associated proportionately with more positive outcomes (Hudgens et al., 2014).

To add to the complexity of this problem, the Administration for Children's Services in New York City only funds the three maternity homes. Gottbaum (2005)

reported on this over a decade ago, and the landscape has not changed. Furthermore, ACS does not track the numbers and whereabouts of foster youth who become pregnant (Gottbaum, 2005). This is ironic, as teens in foster care are 2.5 times more likely to become pregnant than their peers who are not in care (Bilaver & Courtney, 2006). Jaelyn Farris et al. (2007) noted during her work in the NDAPP that when risk is reduced prenatally, teen parents and their children did better on several post-birth indictors; the addition of post-birth psychosocial risk, including homelessness, lowered children's chances of meeting resilience indicators at two time points. In sum, there is a proven intervention that can greatly improve prospects for pregnant and parenting teens across the board, but the funding strategy has been woefully inadequate in most states.

Statement of Limitations

Although this study has provided a richer understanding and a new theory of teens' perspective on and behavior surrounding pregnancy, it has several limitations. First, with respect to design, it is cross-sectional. Future investigations would be well-served by a longitudinal design where teens who were interviewed during pregnancy were also interviewed at a several time points post birth, which no qualitative studies have yet done. Second, the issue of self-selection must be considered with teens in this study. Not only have they voluntarily enrolled in an intervention designed to assist them through their pregnancies and beyond, they have also self-selected into the current study. Thus the problem of "elite bias" (Sandelowski, 1986) comes into play. That these teens may be resilient was, in a way, brought to light by their decision to participate in a helping intervention and following this, to embark on a positive trajectory toward health and increased knowledge. The positive responses to pregnancy and self-care may be

augmented due to teens' voluntary enrollment in the NFP-NYC, where prenatal education and health behavior are stressed, although this positivity reflects patterns in related studies where teens have not received services. Self-report of substance use and smoking during pregnancy may be biased due to underreporting, social desirability, or differing conceptions of "use" (Huizink & Mulder, 2006). Third, there are two sampling concerns. Since the study utilized a convenience sample and participation is voluntary, an undetected core factor might influence both self-selection into the NFP-NYC and a willingness to participate in research. As DeJong (2001) noted, teens who agree to participate in this type of interview may be more pulled-together and organized in general, leading to an overestimation of teens' resilience on a more general level.

Bias in a sample can affect the data gathering process from the outset within both quantitative and qualitative paradigms. Directional trends that may be built-in but not acknowledged can affect themes, codes and categories, and resulting theory (Boyatzis, 1998; Miles et al., 2014) and limit the generalizability of findings. The study sampled from a seemingly non-representative group of young women that self selected into a helping intervention, but approximately 80% of these teens have been exposed to ACEs of the type usually associated with poor prenatal health and attachment in the general population of higher risk pregnant women of all ages (Gavin et al., 2010; Kendall-Tackett, 2007; Seng et al., 2011; Seng et al., 2008). In order to determine whether teens that comprise the study population differ significantly from others of their age group that are served by NFP but did not volunteer, NFP-NYC research staff could provide demographic data on which to derive a comparison.

Fourth, teens are known to underreport clinical symptoms and traumatic experiences or want to keep them private. As Habib and Labruna (2011) and Covington et al. (1997) pointed out, teens may not disclose critical incidents, including dating violence particularly to those perceived to be authority figures. Lastly, is the extent to which theoretical sampling was conducted. Due to the structure of the data gathering paradigm and its inherent limitations, I could not return to the field and obtain data which is theory-driven from prior interviews. Instead, I relied on theoretical sampling of concepts as interviews progressed, and revisiting the data itself. As Corbin and Strauss (2015) assert, researchers' sensitivity to the meanings inherent in data expands and enriches with the process of data gathering and analysis, and insights can occur in later phases of analysis.

Recommendations for Further Research

The study provided a window into the minds and lived experiences of pregnant teens in New York City served by the NFP-NYC. Findings dovetailed with those of numerous other explorations into the significance of pregnancy for teens and their self-identified needs. Although the intent of qualitative explorations is not generalizability (Corbin & Strauss, 2015), the outcomes warrant future investigations into the general population of teens. There are several major avenues for future research that could shed additional light on what pregnant teens need most to thrive during their pregnancy to ensure their own health and that of their infants' as well. These are outlined below and would involve conducting:

- Similar explorations with pregnant teens in additional populations, particularly those who are in the foster care system and have not received the

support of a home visiting intervention. It would be most informative to ascertain whether level of resilience in other highly traumatized teens bears out as a moderator of prenatal health and behavior and perspective when teens are essentially "on their own."

- A mixed-methods investigation with a larger population of teens that would allow for the utilization of demographic and situational data to determine whether there are specific sub-populations of teens who require the most assistance with their prenatal health and behavior.
- Systematic research into the use of the AAI and ACEs questionnaire with pregnant teens receiving structured interventions to determine degree o cumulative adversity and the presence of unresolved/disorganized states to prepare to help prevent the transmission of disorganized attachment strategies.
- A metasynthesis of all qualitative work with pregnant teens that explored their experience of trauma over their life course, to assess the intensity and quality of these experiences, at what developmental stages they occurred, and how these experiences affected teens' behavior, perspective, and decisions.

There are also avenues for future research post-birth to support teens in in their quest to be good parents. Policy positions have been outlined, particularly enhancing the clinical and parenting aspects of supportive housing initiatives. There are opportunities for post-birth explorations and teens have to cope with a live infant and not a projected relationship. These include:

- A longitudinal exploration into the level of resilience that teens express post birth at several time points. Teens are often seen by health care professionals

as “fantasizing and idealizing” their pregnancies, and it would be of interest to determine whether and under what circumstances internal qualities and external conditions of support coexisted when resilient beliefs and behaviors are maintained, as opposed to when they are not. This evidence could potentially offset projections of inadequacy and failure.

- An exploration into the attachment strategies and level of security of infants born to teen mothers 12-18 months post birth, utilizing mothers’ level of prenatal psychological mindedness and reflective capacity, along with outcomes on the AAI as has been done previously, as a predictor.
- A pilot study to introduce a trauma-focused approach to specific NFP sites. The outcomes of the current study could be utilized to provide evidentiary support to augment the NFP intervention. Although the findings stand on their own, they also provide useful information about what can be helpful to this group of teens. These findings have been presented to the NYC-NFP program, and may increase specific attention to the mental health and trauma treatment needs among their clients at large.

Conclusion

When given the opportunity to reflect on their experiences of pregnancy and parenting, teens have provided an alternative discourse through qualitative work to dominant, pathologizing assumptions about youth who become mothers (Barcelos & Gubrium, 2014; Neiterman, 2012). But the accounts of pregnant and parenting teens gleaned through qualitative work, as Duncan (2007), Graham and McDermott (2005), and Wilson and Huntington (2006) note, are not cited in official documents and do not

inform programmatic intervention or policy development. The often non-contextual nature of quantitative work precludes the emic perspective and therefore reduces the likelihood that teens' histories of adversity, their resilient beliefs and behaviors, or their perspective on what would be most helpful to them would be noted, and that their needs would be recognized or met. It is the outcomes of quantitative science that are manifested in programmatic and policy decisions, affecting the outlook and capacity of those designated to assist teens in becoming effective, caring, and involved mothers, rather than simply young people, who although may be beleaguered by survival deficits and traumatic memory, want the best for themselves and their children.

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Appendix A

Letters of Approval

New York University Committee for Activities Involving Human Subjects (UCAIHS)

Nurse-Family Partnership National Service Office

New York City Department of Health and Mental Health Institutional Review Board

NEW YORK UNIVERSITY
A private university in the public service

University Committee on Activities Involving Human Subjects
665 Broadway, Suite 804
New York, NY 10012
Telephone: 212-998-4808
Fax: 212-995-4304
Internet: www.nyu.edu/ucaihs

UCAIHS APPROVAL NOTICE

PI Name: **Jeane Anastas**
IRB#*: **13-9314**
Title: **Prelude to the Post-Birth Relationship: The Impact of Trauma Exposure, Traumatic Stress and Maternal Fetal Attachment on the Prenatal Health Behaviors of Pregnant Teen**
Sponsor: ***Faculty Research Seed Grant--Silver School of Social Work***
Subject**: Initial Review**

Dear Investigator,

In accordance with 45 CFR 46.111, the University Committee on Activities Involving Human Subjects (UCAIHS) reviewed your research at its convened meeting of October 15, 2013. Modifications requested by the Committee were reviewed on October 15, 2013, and has approved the above study involving humans as research subjects. Further the Committee has approved the recruitment of foster children in accordance with 45 CFR 46.409 Wards.** It is approved for the following period:

Approval Date: 10-15-2013 - Expiration Date: 10-14-2014

You should receive courtesy e-mail renewal notices before the expiration of this project's approval. However, it is your responsibility to ensure that an application for continuing review approval has been submitted by the required time. In addition, you are required to submit a final report of findings at the completion of the project.

Specific Conditions of Approval:

- **As per the Code of Federal Regulations: 45 CFR 46. 409 (b), *the IRB shall require appointment of an advocate for each child who is a ward, in addition to any other individual acting on behalf of the child as guardian or in loco parentis. One individual may serve as advocate for more than one child. The advocate shall be an individual who has the background and experience to act in, and agrees to act in, the best interests of the child for the duration of the child's participation in the research and who is not associated in any way (except in the role as advocate or member of the IRB) with the research, the investigator(s), or the guardian organization.*

- The IRB has waived the parental/guardian consent requirements as per 45 CFR 46.408 (c).

Suggestion from Reviewer: If you decide to use a password protected laptop, the reviewer suggested that data monitoring could include a log of the time the laptop leaves the office, the time it returns, and the time the interview data is taken off the laptop. Also, as a reminder, when clearing the data from the laptop, just hitting the delete key does not really remove anything in the file; it can be recovered; therefore, you may want to consider investing in a deleting programs that would overwrite unwanted files.

Number of Subjects: You are approved to enroll a total of **100 subjects**. If you reach this number and wish to increase the number of subjects in your research, you must submit an amendment application to the UCAIHS for review and approval before additional subjects are enrolled.

General Conditions:

Approval by the IRB does not guarantee access to any particular site, individual or data. It is your responsibility as principal investigator to make the appropriate contacts and to obtain written permission(s) from any cooperating institutions and the consent of study subjects before conducting your research. Copies of cooperating institution letters are to be filed with the IRB Office prior to initiating research at cooperating institution sites. Failure to do so may result in the suspension of your research. Participation in this research must be strictly voluntary.

You must conduct your research in accordance with the IRB-approved protocol. An amendment must be submitted and approved prior to making any changes to your research. Please see additional investigator responsibilities in the attached pages.

Please note that the IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact the IRB office at (212) 998-4808 or email ask.humansubjects@nyu.edu

We wish you success with your research.

Sincerely,

Martin Cohen, MD

Martin Cohen, MD, Co-Chair
University Committee on Activities Involving Human Subjects

*Please reference **the IRB number listed above** on any documents or correspondence with the IRB concerning this research.

Investigator Responsibilities
Protection of Human Research Subjects

The Institutional Review Board (IRB) recently reviewed and approved your research. The IRB reviews research to ensure that the federal regulations for protecting human research subjects outlined in the Department of Health and Human Services (DHHS) regulations (45 CFR 46) as well as other requirements are met. The Federalwide Assurance (FWA) (FWA# 00006386) awarded by the Office for Human Research Protections (OHRP) at DHHS, is a written pledge to follow federal guidelines for protecting human research subjects in accordance with the principles of the Belmont Report. **All investigators must read both the Belmont Report and the institution's FWA terms and conditions to understand their responsibilities in conducting human subject research**.

Some of the responsibilities investigators have when conducting research involving human subjects are listed below:

1. Conducting the Research. You are responsible for making sure that the research is conducted according to the IRB approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research.
2. Subject Enrollment. You may not recruit or enroll subjects prior to the IRB approval date or after the expiration date of IRB approval. All recruitment materials must be approved by the IRB prior to their use. If you need to recruit more subjects than was noted in your IRB approval letter, you must submit an amendment requesting an increase in the number of subjects.
3. Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the IRB-approved consent documents. You must ensure that no human subjects are involved in research prior to obtaining their informed consent. Please give all subjects copies of the signed informed consent documents. Keep the originals in your secured research files for at least three years after the completion of your research.
4. Continuing Review. The IRB must review and approve all IRB-approved research protocols at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period.** Prior to the date on which the IRB approval of the research expires, the IRB office will send you a reminder to submit a Continuing Review Application. Although the IRB office sends reminders, **it is ultimately your responsibility to submit the continuing review report in a timely fashion to ensure there is no lapse in IRB approval.** If IRB approval of your research lapses, you must stop new subject enrollment, and contact the IRB office immediately.
5. Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of subjects, subject population, informed consent document, instruments, surveys or recruiting material, performance sites), you must submit the amendment to the IRB for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written IRB review and approval. The **only exception** is when a change is necessary to eliminate apparent immediate hazards to subjects. When this occurs, the IRB should be immediately informed of this necessity.
6. Adverse Events or Unanticipated Problems. Any serious adverse events, or unanticipated problems that involve risks to subjects or others, are unexpected and serious in relation to the research and related to the research; subject complaints that cannot be handled by the investigator; any research related injuries occurring at this institution or at other performance

sites, must be reported to the IRB within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the IRB's requirements for protecting human research subjects. The only exception to this policy is that the death of a research subject must be reported within **24-48 hours** of discovery. All reportable events should be submitted to the IRB using the Event Requiring Prompt Reporting to the IRB form.

7. Provision of Emergency Medical Care. When a physician provides emergency medical care to a subject without prior IRB review and approval, to the extent permitted by law, such activities will not be recognized as research nor the data used in support of research.
8. Research Record Keeping. You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the IRB approved research protocol and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the IRB.
9. Reports to Sponsor. When you submit required reports to your sponsor, you **must** provide a copy of that report to the IRB. You may submit reports at the time of continuing IRB review.
10. On-Site Evaluations or Audits. If you are notified that your research will be reviewed or audited by the sponsor, or any other external agency or any internal group, you **must** inform the IRB immediately of the impending audit/evaluation. This is especially important if the auditor makes a request to review the IRB's records. UCAIHS staff can be available and/or make IRB records available, with appropriate advanced notice, when requested.
11. Final reports. When you have completed (no further subject enrollment, interactions, interventions, or data analysis) or stopped work on your research, you must submit a Final Report to the IRB.

NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Thomas Farley, M.D., M.P.H.
Commissioner

Institutional Review Board
New York City Department of Health and Mental Hygiene
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irbadmin@health.nyc.gov

October 24, 2013

Re: 13-056 Preclude to the Post-Birth Relationship: The Impact of Trauma Exposure, Traumatic Stress and Maternal Fetal Attachment on the Prenatal Health Behaviors of Pregnant Teens
Principal Investigator: Jeane Anastas, Ph.D., LMSW
This Action: DOHMH Not Engaged in Human Subject Research Activities

Jeane Anastas, Ph.D., LMSW
Professor, New York University
1 Washington Square North
New York, NY 10003-6654

Dear Dr. Anastas:

The IRB has received your application to conduct the study **Preclude to the Post-Birth Relationship: The Impact of Trauma Exposure, Traumatic Stress**.

The Chair has evaluated your project and determined that based on the information provided, the only involvement that the New York City Department of Health and Mental Hygiene (DOHMH) has in the project is allowing the study to be conducted at the Nurse-Family Partnership Program in New York City. No staff from the Nurse-Family Partnership will be involved in the conduct of the research except to deal with any reports of respondent maltreatment made by interviewers or when participants report distress from the interview and give permission for referral for help in dealing with that distress. Ms. Lena Green is the person of contact for both circumstances, but is not engaged in the human subject research activities involved with this project.

The Office of Human Research Protection (OHRP) Guidance on Engagement was used when making this determination. The DOHMH will be doing the following, which, according to this guidance, does not engage this Agency in human subject research:

- Inform prospective subjects about the availability of the research
- Provide prospective subjects with information about the research but do not obtain subjects' consent for the research or act as representatives of the investigators
-Provide prospective subjects with information about contacting investigators for information or enrollment
- Seek or obtain the prospective subjects' permission for investigators to contact them
- Permits use of its facilities for intervention/interaction with subjects by investigators from another organization

Therefore, this study does not fall under the purview of the DOHMH IRB. However, please notify the IRB of anything about the DOHMH's involvement in the project changes if you think that this might affect the IRB's initial categorization of the project. Please indicate the ***Protocol* # 13-073** in the subject heading of all future correspondence.

For further information on this determination please feel free to contact the IRB.

Sincerely,

Avery E. Freed, BA, CIP
IRB Chair

9/27/13

On Friday, September 27, 2013, Bill Thorland wrote:

Thank you for your detailed responses to the questions that resulted from the RAPComm review of your project proposal. These responses provided additional clarity with regard to the few points that we felt that we needed to understand a bit better in your plan of work. As such, we have completed our review and grant our approval of your proposal.

According to our current policies for all project proposals, please note that this approval is contingent on your acceptance of the following conditions:

1. To notify the NFP-NSO of any unplanned developments that impact the conduct of the research with respect to the manner or the timeline described in the approved plan of research.
2. To notify the NFP-NSO of any subsequent change in the research plan.
3. To provide the NFP-NSO with documentation of Institutional Review Board (IRB) approval of the research plan and any subsequent IRB approval of modifications that are made to that plan.
4. To notify the NFP-NSO of any breach in the protection of the confidentiality of the research participants.
5. To provide the NFP-NSO with a summary of the findings and conclusions of the research.
6. To provide the NFP-NSO, for non-binding review and comment prior to its public dissemination, any proposed paper or presentation arising from the research.
7. To notify the NFP-NSO of the site and date of public dissemination of any paper arising from the research that has been accepted for publication or presentation.

Initiation of your study at NFP sites will reflect implicit agreement with these conditions. (Please let me know if any of the above conditions of acceptance will be of concern.)

Best regards,

Bill Thorland, PhD | Program Evaluator
Nurse-Family Partnership | National Service Office
1900 Grant St, Ste 400, Denver CO 80203
Direct: 303.327.4250 | Toll free: 866.864.5226
bill.thorland@nursefamilypartnership.org
Links: Website | Facebook | Twitter

Dear Jeane Anastas,

In accordance with 45 CFR 46.111, the University Committee on Activities Involving Human Subjects (UCAIHS) reviewed your research at its convened meeting of December 1, 2015. Modifications requested by the Committee were reviewed on December 10, 2015, and it was determined that this research study is now approved. Your research is now approved for the following period:

Approval Date: December 10, 2015
Expiration Date: November 30, 2016

Approval by the IRB does not guarantee access to any particular site, individual or data. It is your responsibility as principal investigator to make the appropriate contacts and to obtain written permission(s) from any cooperating institutions and the consent of study subjects before conducting your research.Copies of cooperating institution letters are to be filed with the IRB Office prior to initiating research at cooperating institution sites. Failure to do so may result in the suspension of your research. Participation in this research must be strictly voluntary.

You must conduct your research in accordance with the IRB-approved protocol. You are responsible for obtaining and documenting effective informed consent using **only** the current IRB-approved stamped documents. An amendment must be submitted and approved prior to making any changes to your research. Please see additional investigator responsibilities in the attached pages.

Please note that the IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process. We wish you the best as you conduct your research. If you have any questions or need further help, please contact the IRB office at 212-998-4808 or e-mail ask.humansubjects@nyu.edu.

Sincerely,

Martin Cohen, M.D. ,Chair
University Committee on Activities Involving Human Subjects

Appendix B

Interview Guide

Domain	**Question and Probe**
Reflective, exploratory, priming	How has this experience been for you so far? Can you say (how so)? What else would you like us to know about you and your baby that we didn't already ask?
Developmental factors, stability/instability	Could you start by describing your family situation as far back as you can remember? Who lived with you? What did your (family) do at various times for a living? Did you move around much? How did your family situation change over time? Was there anyone else in your family who became a parent when they were young? (If affirmative) What were your thoughts about that at the time? How about now?
Attachment relationships, security/insecurity of attachment	Tell me about the most important person to you growing up. Can you describe (that person)? Are you still close? How old were you when you were closest? Tell me about your relationship now (if applicable) OR What stopped you from being close? What did you wish was different?
Modeling parenting	What did you learn from that person about how to be a mother/parent? Would you do anything differently (or, if obvious), What would you do differently?
Pregnancy as a turning point	How did becoming pregnant change things in your life? What changed the most? How did it change how you think/feel? What did you do differently?

Pregnancy self-care	How do you think you are doing taking care of yourself and your unborn child now? What problems are you are having with this? Tell me about the help you are getting now. What would you like more help with?
Support vs. isolation and loss Experience of stigma	When you first told people that you were pregnant, how did they react? What about friends? Your family? Baby's' father?
Exposure to interpersonal trauma	Some people think that things that happened to them in their early lives could affect them today, and some don't feel that way. Describe things that happened to you in the past that you think are affecting how you are today. How do you think these things may be affecting you today? How do they affect your pregnancy and becoming a mom?
Exploring mental health challenges across the lifespan	Lots of people of all ages have an emotional or behavior problem at some time in their lives, and some don't. What has this been like for you? (If affirmative) What was happening in your life at the time? When was (the problem) the hardest for you? (If reported on past only) How about now?
Agency, relationships with helping professionals	What things are happening to you in your life now that you wish you could change? What kind of help are you getting with these things? What would you like more help with?
Optimism, future perspective	What are your plans for yourself and your baby once the baby is born? In closing, what advice would you give other pregnant young women like you?

Appendix C

Recruitment Flyer

Healthy Young Mothers Study

We Need to Know More About Teens Like You

Are you willing to be interviewed for a research study of pregnant teens sponsored by New York University's Silver School of Social Work?

Are you between 15 and 19 years of age?
Are you pregnant with your first baby?

Can you sit down for an hour to answer some questions about your life growing up, your feelings these days including how you feel about your baby, and your health?

Participation is **VOLUNTARY** and everything you say in the interview will be kept **CONFIDENTIAL**. When you finish the interview, **you will be paid $50 cash**. You can be interviewed where you live or at some other location as long as there is a private place to talk.

If you want to know more about the study or if you want to be part of this research, **CALL** or **TEXT** this **CONFIDENTIAL** number (347-918-6959) and tell us how to reach you.

NYU Silver
Silver School *of* Social Work

THANK YOU!

Appendix D

Participant Consent

Form

NYU Silver
Silver School *of* Social Work

Nurse-Family Partnership
Helping First-Time Parents Succeed®

Healthy Young Mothers Study

We Need to Know More About Teens Like You

Are you willing to be interviewed for a research study of pregnant teens sponsored by New York University's Silver School of Social Work?

Are you 19 years of age or younger? Have you already felt the baby move in your belly?

Can you sit down for an hour to answer some questions about your life growing up, your feelings these days including how you feel about your baby, and your health?

Participation is VOLUNTARY and everything you say in the interview will be kept CONFIDENTIAL. When you finish the interview, you will be paid $25 cash. You can be interviewed where you live or at some other location as long as there is a private place to talk.

If you are under 18 years old, your parent or guardian will also have to agree for you to be interviewed.

If you want to know more about the study or if you want to be part of this research**, CALL** or **TEXT** this **CONFIDENTIAL** number **(dedicated cell phone number will be given**) and tell us how to reach you.

THANK YOU!

NYU Silver
Silver School of Social Work

Consent Form
Healthy Young Mothers Study

You are eligible to take part in a research study of pregnant teens. The study explores some of the troubles you may have had in the past, your current mood, how you feel about your baby at this point, and what you are doing to take care of yourself while you are pregnant. The purpose of the study is to find ways to help young women like you be as healthy as possible during their pregnancies so they and their babies can get off to a good start together once the baby is born.

The study is being conducted under the direction of Dr. Jeane W. Anastas, Ph.D., LMSW, Professor at the Silver School of Social Work, New York University (212-992-9711; jwa1@nyu.edu).

If you agree to be part of this study, you will be asked to take part in a research survey that will last about one hour. You can ask to have the questions read aloud to you or you can read the questions yourself. You will also be asked if some of your answers can be tape-recorded, but you can be part of the study without saying "yes" to taping.

Participation in this research is **completely** voluntary, meaning you can say yes or no to this request. If you do agree, at the end of the interview you will receive a cash payment of $50.00 to thank you for the time you spent answering our questions.

All of the information about you collected for this study will be kept **strictly confidential**. Confidentiality will be maintained by collecting data that is only identified by a code number, not any name. The survey and the consent forms will be stored separately in locked file cabinets in Dr. Anastas' private office at the Silver School of Social Work. Study data on computer will be accessible only to research personnel. Information gathered in this research will be shared in such a way that no individual in the study can be identified. All audio recordings and research records with names on them (like this consent form) will be destroyed three years after data collection is completed.

The only exception to confidentiality that might occur would be if the interviewer has reason to believe that you may be in danger of some kind, such as experiencing abuse, in which case the interviewer is required by law to share that information (and only that information) with the proper authorities. You will be told about this by the interviewer if this happens.

Although every effort will be made to avoid it, you might experience some distress when answering certain survey questions. If this happens, **with your permission**, the people already helping you will be told about it so additional help can be provided.

Participation in this study is **completely voluntary**. You can refuse to answer any specific question, end the interview, or change your mind about being in the study at any time.

NYU Silver
Silver School of Social Work

You are being asked to be part of this study through the agency where you are already receiving services from a visiting nurse. If you do not want to be part of this study, it will not affect the services you are receiving in any way. The only benefit to participating in the study will be to contribute to efforts to best help young women like you and their babies in the future.

If there is anything about the study or your participation in it that is unclear or if you have questions or wish to report a research-related problem at any time, you may contact Dr. Anastas at 212-992-9711 or jwa1@nyu.edu. For questions about your rights as a research participant, you may contact the University Committee on Activities Involving Human Subjects, New York University, 212-998-4808 or ask.humansubjects@nyu.edu .

Permission to Participate

By signing here, you are agreeing to be part of this study. You are being given a blank copy of this form so you will have a record of what you agreed to and how to contact someone in case of any problem or if you later change your mind.

Date

Your signature: _____ _____

Interviewer initials: _____

Permission to Audiotape the Answers to Some Questions

By signing here, you also agree that some answers to survey questions can be audiotaped. The recording will only be used for research purposes. The recording will be stored on a secure computer in the same manner as described for your answers on the survey. This means that only researchers will have access to the information and your name will not be attached to the recording. However, if you would like a copy of the recording, you may request one. If you listen to the recording and decide there are things you want erased OR if you change your mind about letting the researchers use the audio recording, you may contact Dr. Anastas (see above) and the recording will be altered or erased from the research record as you request.

Signature for audiotaping: _____

Interviewer initials: _____

Appendix E

Interview Observation Form

Complete within 24 hours of interview and upload to permanent storage.
ID #: ____ Date: __/__/____ Interviewer Initials: _____ NFP Site: ____
Type of location: _____
Time began (Int.) _____ Time ended (Int.): _____

What was teen's demeanor during the interview (e.g., note anxiety, irritability, negativity, relaxed or tense, easy or slow to engage)?

Was teen guarded when speaking about her life? Speculations as to why (e.g., prior information gleaned during the survey, setting, history)?

What observations can be made about teen's non-verbal behavior (e.g., posture, gestures, eye contact, tone, rate /volume of speech)?

If the interview took place in teen's home or a teen residence, what observations can be made (e.g., state of home environment including cleanliness, orderliness, overcrowding, noise level, safety concerns; characteristics of neighborhood and building)?

Was there any follow up conversation after the interview was completed (e.g., mental health follow up, questions about the use of the information)?

Were there concerns about the quality or veracity of the information received (e.g., social desirability, extreme guardedness, teen's emotional tone during interview, distractions

Interviewer Notes:

Appendix F

Sample Merge Record

(Pre-merge)
Network View: be a role model/do your best to raise your kid right
ALL CODES and QUOTES
Created by: Super 2017-02-01T10:30:49

Nodes count: 25
Codes (2):
IMAGINING POSITIVE MOTHERING: be a role model/do your best to raise your kid right {9-3}~
IMAGINING THE BEST FOR MY CHILD: what I wish for my baby/my child going forward {12-2}~
Memos (1): views of the future/maternal role

(Merge)
Network View: be a role model/do your best to raise your kid right/ensure their future
FINAL QUOTES only

Created by: Super 2017-02-01T10:36:01

Nodes count: 24
Codes (3):
PARENTING OPTIMISM: Being a role model and raising my kid right {20-2}~
Memos (1): Views of the future/maternal role

APPENDIX G

Code Book

Code Info		Code Definition
I: SUPERCODE: Early Stability and Support	■	**Teens' experiences of stability and support in early life; intact families and few moves.**
I_A: Remembering Normal Life: "Living Like a Regular Kid"	■	Teens described an early, "expectable" existence. Quotes created a picture of relatively normal family life, living with parent(s) and siblings in a "good "neighborhood that was "OK and not too violent", , playing with siblings, going to school. "Like a regular kid" exemplifies this.
I_B: Being Provided For: "My Parents Always Worked"	■	Teens made a point of discussing their parent(s)' working life, often with pride. They described the nature of the work, how long the parent was employed, and often their acknowledgement that they "did it for us". Sometimes teens also noted that their parents were often out of the house due to their working life, and that they "understood" this but were aware of the price for their parents and themselves, in some cases.
II: SUPERCODE: Early Attachment: Supportive, Loving Relationships	■	**Teens early experiences of love, attachment and support from caregivers, including immediate and extended family and foster parents.**
II_A: Getting Love and Support from my Mother: "She Puts Me First"	■	This code was supported by quotes that discussed the positive affect between teen and her mother - love, caring, support. Teens also discussed mothers' tendency to communicate with them effectively, and/or expressed desire to do so. This code also included quotes where teens described why they would model their parenting behavior after their mothers', and that mothers showed them "strength" in that they sacrificed to provide materially.
II_B: My Dad/Stepdad Had my Back: "Dad Was Supportive/Like my Hero"	■	In these quotes, teens described a supportive, loving relationship with father/stepfather. They made comments like "My dad was my hero, we had a special bond" or "I could always count on him". Sometimes these comments were made in the context of an adversarial relationship with their mothers, or in the absence of mothers.
II_C: My Grandmother Was Most Important: "Everything Was About My Grandma"	■	This code reflected teens' descriptions of a loving, caring, close, essential grandmother, who was a mother figure. These quotes were usually made by teens who had adversarial relationships with their mothers. Quotes included "I was always in with my grandma", "My grandmother was sweet and loving", and "My grandmother was always there for me, she never turned on me."
II_D: Feeling Cared for By Foster Parents: "Better than My Real Family"	■	These teens described positive relationships in foster care, either as young children or currently with positive, emotionally and materially supportive foster parents. They stated, "My foster mother was supportive and not hurtful," and "My foster parents support me with stability."

III: SUPERCODE: Getting Support Now: From Family, FOB, Friends	■	**Teens' reports of the support they were currently receiving while pregnant.**
III_A: My Family is Behind Me: "They Support Me/Came Around About the Pregnancy"	■	Here, teens described how their families were positive and supportive and not judgmental about their pregnancies from the beginning, or became supportive in short order and provided assistance. There was a thin line between "family not supportive" and "family *became* supportive", as family members started out being disappointed. Some never came around and some did.
III_B: Feeling Support from my Baby's Father: "He Stepped up/He's Committed to Me"	■	This code is distinguished by quotes that describe, first, how a baby's father behaved on a feeling level, that they were or became more committed to the teen and expressed a desire to be with her and the baby. In this positive support code, teens also described how their baby's father stepped up materially, making arrangements, obtaining supplies, making things better.
III_C: My Friends Stuck by Me: "I Realized Who My Real Friends Were"	■	Teens described the loyalty of their friends and the continuation of previously-held friendships, noting that the experience of becoming pregnant helped identify "who my real friends were".
IV: SUPERCODE: Environmental Stressors: Danger and Instability	■	**Teens experiences of external, environmental stressors that were peri-but not fully traumatic.**
IV_A: Feeling Vulnerable to Danger and Violence: "There was Bad All Around"	■	This code referred to teens' memories of feeling threatened by/told to feel threatened by, and of feeling fearful of their surrounding/immediate environments, (threats from the microsystem). This quote, "My mother wouldn't let me outside", exemplifies this code. This code subsumed the "got bullied" codes.
IV_B: Moving Around and Feeling Unstable: "Not my Kind of Life"	■	In this code, teens' comments brought to light a general feeling of instability - moving a lot, having to be in and out of shelters, lack of resources. Careful reading of "living in shelters" and "instability - multiple moves" although described different living situations, were similar in feel as these teens reported that they were not able to get their roots down anywhere for different reasons. Some of the shelter and moves reasons overlapped; "My mother moved down south and we lost our apartment so I was passed around/had to live in a shelter" or, "I was passed around multiple times" "We moved from place to place", "We moved a lot - a lot of shelters". The teens had different, sometimes opposing things to say about the shelters - sometimes they were a source of stability, but the circumstances that got them there were not (e.g., domestic violence, loss of rent, abuse, one parent being asked to leave). Teens lived with other relatives because they had no choice/out of necessity. Some teens discussed living with many people in their household for at least part of their lives.
V: SUPERCODE: Interpersonal/Internal Stressors: Feeling Alone and Unsupported	■	**Teens discussed their negative feelings about pregnancy, including feeling stressed and saddened, and loss of their teen years**

V_A: Feeling Unsupported by Family: "My Pregnancy Disconnected Us"	■	In this code, teens provided examples of how their families turned against them when they found out about the pregnancy, and became angry at them. The teens who experienced this were often bitter and despondent over these comments. They recounted that "everybody was upset", that their mothers may have "thrown them out" when learning of the pregnancy or told them to get an abortion, and that they and their fathers were "disconnected" since finding out.
V_B: My Baby's Father Isn't Involved: "I'm Doing This Alone"	■	Teens stated that their baby's fathers had their priorities wrong, that they were not helpful or involved with them or the pregnancy, and at times, verbally abusing them. They voiced low expectations but made these statements with despondency. Teens stated, 'Don't worry about the baby's father, you may be doing this alone but don't give up."`
V_C: Losing my Grandmother: "My Grandmother was a Part of Me"	■	Teens described the death of an important grandparent, almost exclusively a grandmother. Teens perceived their grandmother's death with sadness, grief, stating "loss of my grandmother was a big blow", "My most emotional problems were when my grandmother died", "My grandmother is watching over me from heaven, she pops into my dreams/talk to me,", "The only drastic change was when my grandmother passed away."
V_D: Not Feeling Heard by My Mother: "I Needed a Guide, Not a Dictator"	■	This code was supported by quotes that described a lack of communication with mothers as a stressful experience. In quotes that supported this code, teens described mothers who did not communicate well, were gruff and focused on material support at the expense of emotional support, and were somewhat dictatorial. These quotes were distinguished from frank abuse. Teens seemed to crave better communication and were aware of what was missing, stating "I wish she would have sat down and gotten to know us", or "I'd listen to my kid instead of half-assed listening".
V_E: Experiencing Stigma and Judgment: "Teen Mothers Get Judged a Lot"	■	Responses that supported this code often emerged from questions about how others responded to their pregnancies; teens stated in general that "teen mothers get judged a lot", not referring specifically to their families but on a more meta level. Teens noted that people in their families or social circles were surprised or shocked because of some characteristic of theirs, in particular, that they were "shy" or "studious" or "never talked about babies". Teens also discussed their family members' overall view of them, predating the pregnancy, stating, "They didn't believe in, trust, or understand me". Teens recounted episodes of "trying to do well" and noting that their families did not believe/believe in them, often expecting the worst from them.
V_F: Feeling Separated from My Family: "Wishing to be Together"	■	In this code, teens described being separated from important family members, whether parents, grandparent or sibling and the impact it had on them. This may have come about as a result of emigration, death, or divorce. Teens were wistful here, describing the circumstances around the separation and their desire to be with family members they had been separated from. They also expressed sadness at parents'

		separation, “I wanted them to be together”, “I wanted both loving parts” or “I can’t see my grandmother because my uncles think I’m bad.”
V_G: Not Getting Help: “My Workers Don’t Do Anything”	■	This code was supported by quotes from a few teens that were not able to relate to or feel supported by service providers, or, who had negative experiences in the context of some positive ones. They expressed resignation or hopelessness that they would receive help. These quotes were double coded with ‘Harm from within/from the system” for teens in foster care.
V_H: Negotiating an Uncertain Future: “I’m Not in Control of Anything”	■	Here, teens are specifically taking about an existential sense of things not being under their control in life, and the general uncertainty of things, and that this was stressful. They also described the kinds of things day to day as teen mothers that they feel they will not be able to control. “I can’t do anything – nothing I think about has any control.”
VI: SUPERCODE: Experiencing ACEs: Abuse, Harshness, Neglect	■	**Teens described experiences of child abuse and neglect.**
VI_A: Feeling Unlovable: “Who Can Love Me If my Mother Can’t?”	■	In this code, teens' supporting quotes described a traumatic attachment to a mother who was unable to bond and was psychologically hard on them. Some expressed concerns about their own parenting, wondering of they would be able to be “what they never had” because their mothers were “not mother figures” and they seemed to have a clear sense of what this would look like, noting that they hoped to “be there for/create bond with my child”. Teens also noted that mothers “put a man or partying before us kids” and remarked that they would not model this kind of mothering. These codes reflected teens' wishes for balance rather than a split duality - harshness versus guidance/kindness. Teens also wanted to believe" that their mothers weren’t so hard on her or threatening- they wanted to attribute the behavior to the “pills and her mental health problems”.
VI_B: Dad Was Absent, Frightening: “I Just Wanted that Father Figure”	■	This code was about fathers not being “father figures” in several ways. First, was the experience of fear - being hurt physically or psychologically by their father or stepfather, and experiencing fear, “You feel afraid after a while’. This code also included quotes which described father/stepfather's violent behavior secondary to alcohol abuse. Teens stated that they saw their father hit their mothers. Second, was the experience of being abandoned. Teens described their fathers as "missing" due to involvement with other women and having other children, at times teens expressed feeling like a "second fiddle" to these children, with much sadness, “Dad left – he had another family”. Third, fathers were unable to work, “My dad couldn’t hold a job, he just sat around and drank”, exacerbating instability and fear of negative things happening.
VI_C: Experiencing Verbal/Psychological Abuse: “All They Did was Hurt Me”	■	This code exemplifies direct psychological or emotional abuse with words - it was not often distinguished from other forms of maltreatment but it is perceived to be a specific form of an ACE, with severe consequences for self

		esteem/image going forward.
VI_D: Being Sexually Abused: What Happened to Me	■	Teens described the events, or storyline and circumstances of their experiences of sexual abuse, rather than the outcomes, aftermath or consequences, “I was sexually abused by my uncle at 13”. The consequences, often where family members did not believe them or they were afraid to speak about what happened for fear of reprisal, were coded elsewhere.
VI_E: Witnessing Violence in my Home: “They Were Fighting in Front of Me”	■	These quotes involve witnessing fighting and arguing between family members or immediate neighborhood, without being involved in these events, “I saw them fighting in front of me”, and also, being the target of physical violence. While the latter was not as common, it did occur and teens described self-defense tactics.
VI_F: I was Neglected, Passed Around: “They Gave Me to Whoever”	■	The quotes that supported this code involved teens' descriptions of neglect: either being passed around between relatives because parent(s) could not care for them, and not having material or psychological needs met. Teens used the phrases “passed around”, “fended for myself” or “passed to whoever”.
VI_G: Experiencing Abuse in Foster Care: “For Me It Was Torture”	■	This code captures all quotes where teens described how they were physically abused - hit, hit with objects, shoved, thrown. Only teens that had been in foster care described physical abuse, either at the hands of foster families or their own parents prior to removal or during attempts at reunification. "In harm's way" describes this code - teens discussed instances of abuse, neglect, targeting in foster care and in RTC's, where staff did not help, protect or guide them. "ACS isn’t helpful/put you in harm's way", “I was hit with belts”. They also recounted their experiences of being taken from their homes, multiple placements, and placed in residential treatment centers (RTCs), psychiatric hospitals, or detention centers, and the circumstances that resulted in this placement and the kinds of things they saw and experienced there.
VII: SUPERCODE: Experiencing Mental Health Problems	■	**Teens recounted their struggles with their emotions, describing feelings of sadness, fear, PTS, excessive anger, dissociation, and shame**
VII_A: Experiencing Sadness, Woe: “Feeling Depressed out of Nowhere”	■	This code was applied to quotes where teens discussed times in their lives when they felt very sad, or experienced a bout of clinical depression. This is not meant to equate sadness due to traumatic events or losses with depression; this would be considered controversial, but to capture and differentiate the quality of teens' state of mind/mental health. “I’m talking like, deep depression”, and It just comes over me, like every year. My family knew”.
VII_B: Experiencing Fear, Dysregulation: “It Just Comes Over Me”	■	Here, teens described feelings of fear, often that came over them for no known reason and also the experience of fluctuating emotional states and flashbacks. This code captures the PTS symptoms within C-PTSD. “I’d get a flashback and the staff knew how to help me”. “Sometimes

		the fear just comes over me".
VII_C: Feeling Angry a Lot: "I Just Lashed Out"	■	Teens described times in their lives when they felt notable anger, often in regard to being mistreated, lashing out at others and "being too aggressive" but often qualified this by saying they felt sad at the same time.
VII_D: Suppressing, Dissociating, Self-Medicating: "I Blacked It Out"	■	Teens discussed dissociating - either on purpose by blocking things out, having few memories of difficult times, or by self-medicating with alcohol or marijuana before their pregnancies to avoid emotional pain. Only one or two teens described a derealization or depersonalization experience. Supporting quotes included "I blocked them out," and " I smoked/drank to repress".
VII_E: Feeling Shamed and Blamed: "Keeping it All Inside"	■	This code captures statements where teens expressed that it was their fault that something bad happened to them or someone close to them, often because they "handled it in their own heads", and/or were unable or unwilling to discuss it or receive feedback from anyone. Teens stated, "I could be blamed" for bad things that happened to them, enhancing a sense of shame. This code refers to teens' reflections about their experience of being guarded and lacking in trust, and, why they felt they were guarded and mistrustful/quiet, "I remain emotionless, quiet", "I'm very guarded"..
VIII: SUPERCODE: Pregnancy is a Way to a Better Life	■	**Teens discussed their positive views of pregnancy and prenatal health behavior**
VIII_A: Becoming Responsible: "Pregnancy Changed Me from a Kid to a Mom"	■	In this code, teens stated that the pregnancy "changed them" from a kid to a responsible mother, and described the thoughts and behaviors that came of this. "Pregnancy made me want to be more mature/responsible "I am creating/building a human being". Teen discussed changes in their thinking - they meta-processed the meaning of their pregnancies as a turning point at which they began thinking differently, and that they wanted to use this as a way to embark on a new, more positive life trajectory, stating "It's a new chapter in my life".
VIII_B: Caring for My Health to Care for My Baby: "Getting My Act Together"	■	Teens specifically indicated that they were in the frame of mind to consciously care for their health in the service of their baby's health, and described the behaviors involved. It included quotes like, "I'm eating better for the baby". "I'm not going out any more", "Infusing more water", "Keeping my stress lower", "Going on line to look things up".
VIII_C: Stopping Bad Habits: "Harm Your Baby and you Harm Yourself"		In these quotes, teens specifically discussed behaviors that they were engaging in that could be harmful to themselves and their unborn infants, and that they desisted in these behaviors once they found out they were pregnant. These behaviors include smoking, drinking, and smoking marijuana, and eating "junk food", and that if they were "fighters", they stopped fighting as it was commensurate with their emerging vision of themselves as mothers. It was important for this study to break these out and discuss separately from the "idea" of health as these are behaviors that teens are often criticized for.

VIII_D: Feeling into Attachment and Love: "It's About Us Now".	■	The quotes that supported this code indicate feelings of attachment and love for the fetus, and how they would adopt a maternal role, how much love they had for their babies, captured by the quote, "It's about us", "I'm not just thinking about me anymore – everything's about my baby", or "I've got to keep her close to me and develop that bond". Some teens were faced with the prospect of having an abortion - either because they were wrestling with the idea, or, because they were urged to consider it by family members. They stated that they either changed their minds or never considered it, because "babies are a blessing".
IX: SUPERCODE: Pregnancy: Stress, Sadness, Loss	■	**Teens discussed their negative emotions about being pregnant and their loss of expectable adolescent activities**
IX_B: Not Feeling Ready to Have a Baby: "Stressed and Depressed"	■	Teens described their emotional reactions to the pregnancy. Those who commented here described feeling stressed and depressed by the pregnancy, and some but not all stated that this happened "at first" but that as time progressed they became happy about it.
IX_A: Losing Fun, Friends, School: "I Had to Give It Up"	■	In this code, teens discussed what losses occurred for them when they became pregnant and most often discussed losing friends, not being able to go out at night with them, and at times, ceasing enjoyable activities. These quotes were usually relayed with some sad affect. Some teens also noted how they were no longer able to attend school or get a job, which they wished to do.
X: SUPERCODE: Resilience Beliefs	■	**Teens expressed resilient beliefs and provided evidence of resilient behaviors as described in the literature on resilience in teens at risk, including**
X_A: Expressing my Autonomy: "Striking Out My Way"	■	In this code, one of three that described agentic behavior or thoughts, teens stated that they did not want to follow rules imposed on them simply for the sake of not following them. This code family seemed to have three subthemes. First, is the simpler manifestation – "I think these rules are silly/not going to follow them", vs. "I need to assert my independence". In this second sub-theme, teens discussed asserting themselves with respect to emerging independence, not "breaking the rules". They stated that they needed to do it their way, to make their own mistakes, mostly in regard to parental controls or barriers in foster care. The third subtheme involved teens' descriptions of plans that they had developed for themselves and how they saw their futures unfolding as they executed these plans, or discussed the importance of doing this.
X_B: Maintaining Optimism About Life: "I Always Have Hope"	■	Teens were generally optimistic about their futures, and most importantly, perceived the possibility of a positive future. Optimistic teens stated they thought things could improve for them, and at times, that they would make the best out of their situation, and advised others to "always think positive", "never give up on your dreams", or, discussed the duality of their current scenarios, inherent in the quote, "The future's not always under your control but

		you can make the best of it".
X_C: Affirming Parenting Optimism: "I Can Be a Role Model"	■	Teens describing their desire to be a good mother and a role model, often stating, "You can be a role model and raise your kid right", "I may not have been perfect but I know how I want my kid to be/live/perceive me", to ensure their child's future. They often spoke about this in the context of what they would do differently than their own mothers. This "be a role model" seemed to say, "I am imagining my role in helping create my child's future".
X_D: Distancing from Dysfunction: "I Can Keep Myself and Others Safe"	■	This code involves teens reflecting on "what I did to protect myself/protect or educate others" as a consequence of things that happened to them. Teens described how they were able to anticipate dysfunctional or dangerous situation and this vigilance could be helpful to them and to others. They were willing to advise others on how to stay safe, particularly from sexual assault/abuse. They also discussed the need to "protect my baby from danger and having bad people around" going forward, but also the tendency/need to protect herself and others across her lifespan.
X_E: Planning for Security Through Home, School, Work: "Making it On My Own"	■	Within this code, several subcodes emerged where teens described ways in which they wanted to improve their security through permanent housing, better financial prospects, and higher education. Teens expressed a desire for material assistance, stating they needed to improve their security and financial status and/or that they needed supplies for the baby quickly, which they did not have since, "He's coming soon!" Teens discussed wishing to enhance their security through housing of some sort, where they could feel responsible for their baby and themselves. The majority of teens expressed a strong wish for permanent housing, and described this as one of their greatest challenges, "I just want my own home". They also outlined plans to continue their education and described specifically how they would approach this. Teens expressed a desire to ensure their futures through employment, noting the difficulties inherent in obtaining work given the pregnancy and early parenting, asking, "Who will hire me eight months pregnant?"
X_F: Relating to Others to Seek Help: "They Cared About Me"	■	Teens expressed a desire to obtain more knowledge about parenting, and more assistance with the emotional states they encountered during and around their pregnancies. They provided evidence for relatedness here, describing how they had been able to receive help and support and also, compassion and care from different types of service providers over the course of their lives, e.g., nurses, social workers, therapists/counselors, staff at facilities. These experiences may have been protective factors for these teens. In this code, teens described specifically how their NFP nurses assisted them and provided knowledge and information to help them through their pregnancies and with childbirth. A few teens also remarked that their nurses were "like a therapist". Some were or had been in psychotherapy and had positive experiences, and would advise other teens to pursue it – "I would say find a therapist to talk to because

		having a baby is not an easy decision".
X_G: Reflecting on my Feelings and Experiences: "Looking Inward"	■	This was a sort of meta-code which reflected not only what teens said, but the introspection and reflectiveness in how they said it. Quotes were coded for reflectiveness if teens' statements provided evidence of being able to explore and consider their own thoughts and feelings, as well as the thoughts and feelings of others, in a sense, mind-mindedness. Subcodes included "Thinking about the past", "I wanted someone to love", "Learning from my rough past: "Don't stay in the dirt." Teens were able to state unequivocally that the baby was a replacement attachment figure, "I wanted to have a baby since I lost grandmother", "Didn't have love from my mother so I wanted a baby". They were also able to recount the advantages of doing the survey and the interview, stating that it helped them to speak about their pasts and that all teen mothers should be able to do so and "tell people what they really need".