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Project Passport: An Integrated Group-Centered Approach Targeting Pregnant Teens and Their Partners

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Introduction

Adolescent childbearing has been a public health concern due to the associated adverse outcomes for mothers and their children. Children of mothers ages 17 and younger fare worse compared to children of older mothers in terms of cognitive development, language and communication skills, learning competencies, emotional well-being and social skills, as well as physical and motor development.[1] The children of teenage mothers are also more likely to have lower school achievement, drop out of high school, be incarcerated during adolescence, face unemployment as young adults, and give birth as teenagers.[2]

Evidence-based interventions targeting pregnant adolescents are lacking. Ruedinger and Cox[3] reviewed home-, community-, school-, and clinic-based programs focused on improving outcomes for both teen mothers and their children. The authors concluded that the effects of those programs remained inconclusive due to lack of control groups, small sample sizes, and economic and social confounding factors. One program that has been effective in improving pregnancy and child related outcomes is the Nurse-Family Partnership program. This program matches first-time mothers with nurses who provide ongoing support through home visitations during pregnancy and until the child's second birthday. While effective, the program is costly and labor intensive.[4]

The present program was designed to address an important gap in evidence-based interventions targeting pregnant adolescents, and especially programs that also integrate partners. As teen pregnancy is associated with various risks, it is important to continue to develop and test effective interventions for this priority population. Additionally, researchers emphasize the need for integrated approaches addressing the multiple needs of pregnant adolescents to improve psychosocial outcomes.[5] This paper describes the development of Project Passport, an intervention to improve health, educational and psychosocial outcomes among pregnant adolescents and their partners.

Methods

Intervention Development

A logic model guided the development of the intervention. A logic model is a theory about the proposed causal linkages among the various components of a program and is often used to design interventions and evaluations. The logic model framework identifies targeted behaviors to be changed, determinants predisposing individuals to those behaviors, and program activities that can address those determinants and behaviors. Through this process, it is possible to set clear goals and make a plan in order to reach the targeted health goals.[6] Logic models have been used to

systematically design and develop other effective teenage pregnancy prevention programs.[6,7]

The logic model approach as described by Kirby[7] is a systematic intervention development process encompassing several steps: (1) identification and selection of heath goals to be achieved; (2) identification of important behaviors to be targeted; (3) identification and selection of determinants; and (4) identification and selection of possible interventions with activities that have sufficient strength to improve each selected determinant.[7] These steps are outlined below as they were applied to the development of Project Passport.

Identification of Health Goals

Based upon a review of the empirical literature below, and by standards set forth by the funding agency,[8] the selected primary health goals for this intervention were to reduce subsequent teen pregnancies, increase the teen mothers' educational attainment, and increase child immunizations. Secondary goals were to reduce depression and intimate partner violence, and increase involvement by the father of the baby.

These health goals were selected as they address significant issues related to adolescent pregnancy. Minority adolescents are likely to experience a subsequent pregnancy soon after their first birth. Girls between the ages of 17 and 19 have the second highest rate of repeat

births at 21%.[9] The long-term consequences of adolescent pregnancy also include poor educational attainment, unemployment, and lower socioeconomic status for the teen mother.[10] Infants of teen mothers are at increased risk for late initiation of immunizations.[11] Lack of immunization coverage increases infant risk of acquiring and spreading a disease that could easily be prevented through vaccinations. Studies have also shown that young mothers are at greater risk for using harsh parenting practices and physically abusing their children.[12,13]

Adolescents are at high risk for depression while pregnant and following delivery.[14,15] Longitudinal studies have shown that children of mothers who experience depression in the postnatal period score poorly on cognitive measures early in development and that this effect is strongest in male children.[16,17] Pregnant adolescents are also at high risk of experiencing intimate partner violence (IPV).[18]

The role of the father of the baby has been examined in the context of pregnancy and prenatal care. Young fathers want to be involved in their children's lives, but they often face multiple barriers to involvement, such as lack of skills or resources for parenting, education, and employment.[19] Low-income communities tend to have low marriage rates and a high number of single-mother families, especially among young parents.[20] Teen fathers might be initially involved with teen mothers, but few marriages

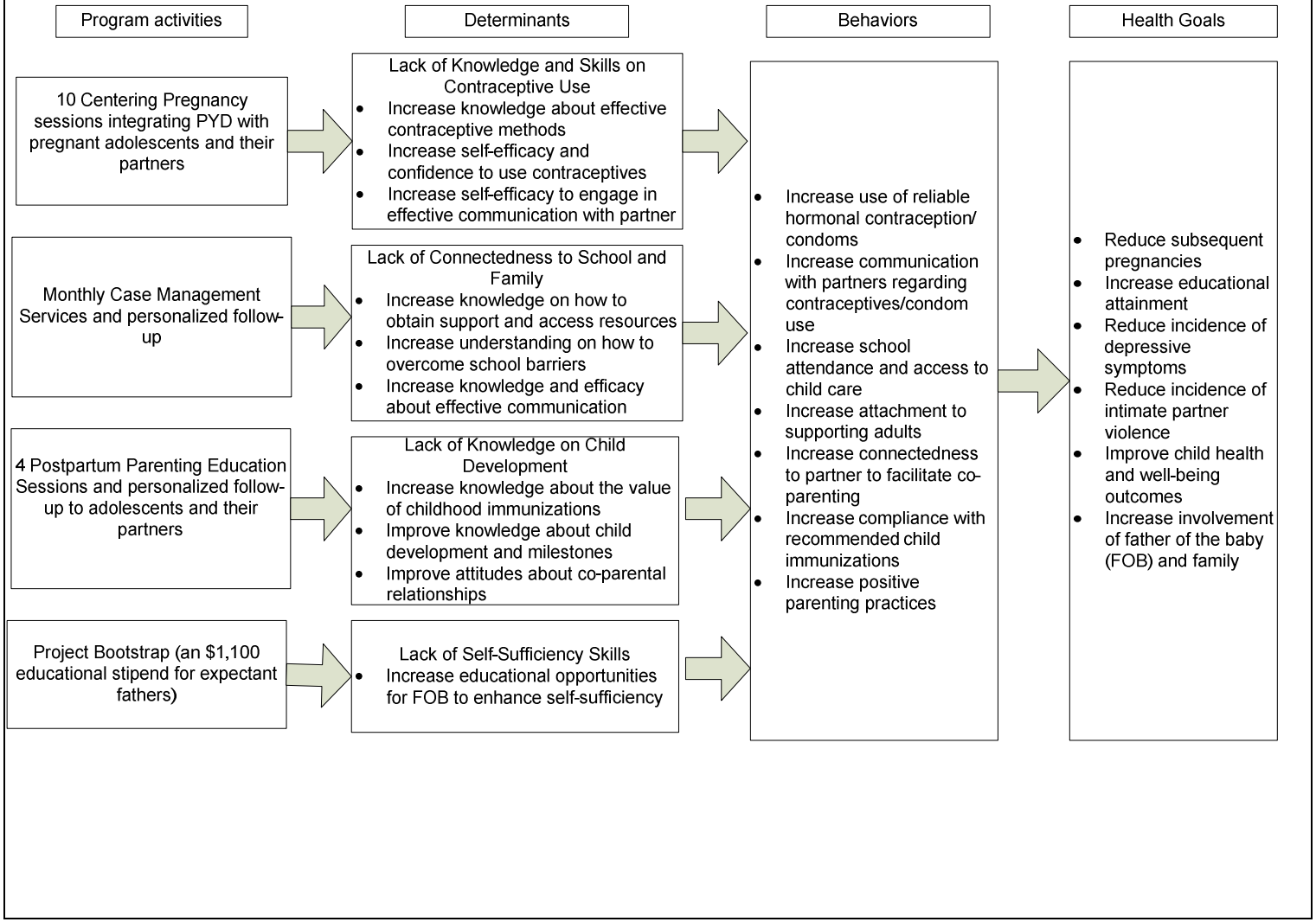
result; over time there is relationship breakdown and decreased parental contact.[21] Studies suggest that minority adolescents, particularly African American fathers, remain single and do not live with their children.[22] A study by Wiemann, Agurcia, Rickert, Berenson and Volk,[23] which assessed maternal reports from 719 adolescent mothers, found over 25% of the babies' fathers provided little to no support. Partners who provided limited support were more likely to participate in chronic substance use, gang or police involvement, or partner-directed violence.

Research studies point to the importance of fatherhood involvement in protecting children from the adverse effects of poverty and school problems, as well as lifelong problems of substance abuse, repeated cycles of pregnancy, and crime.[24,25] Studies show that young fathers often perceive multiple barriers to involvement, such as poor financial stability, lack of knowledge of child development, and poor relations with the child's mother. This lack of involvement is influenced by lack of skills or resources for parenting, lack of educational or employment skills, poor relationship communication skills, as well as engagement in multiple risk behaviors.[26] This suggests that including young fathers in teenage pregnancy programs is essential.

Selection of Behaviors and Determinants

Several behaviors are associated with the selected health goals. These include use of reliable hormonal contraception/condoms,[27] communication with partners about contraceptives/condoms,[28] school attendance,[10] attachment to supporting adults,[14] positive parenting practices,[29] and compliance with recommended child immunizations.[11] In order to address these behaviors, determinants in four important areas for the adolescent mother and/or father were selected: 1) Lack of knowledge and skills for using contraceptives, 2) Lack of connectedness to school and family, 3) Lack of knowledge on child development, and 4) Lack of self-sufficiency skills (see Figure 1).

FIGURE 1: LOGIC MODEL-PROJECT PASSPORT



The selection of behavioral determinants was guided by the integration of several theoretical frameworks. These included Bandura's social cognitive theory (SCT),[30] the Theory of Planned Behavior (TPB),[31] and the Positive Youth Development (PYD) framework.[32] In SCT, reciprocal determinism refers to an interaction between one's behavior, environment, and personal attributes. Personal attributes include constructs such as self-efficacy, outcome expectations, behavioral capability, management of emotional arousal, and perception of the environment. Some personal factors frequently reported to predict unintended pregnancy include ambivalence about becoming pregnant and dissatisfaction with birth control method-specific side effects.[18] According to SCT, the environment can include such outside entities as one's peers, partners, family, and community. Pregnant and parenting teens with a good support system tend to have fewer critical problems.[33]

TPB posits that an individual's behavior is influenced by behavioral intentions, which in turn are influenced by one's attitudes, subjective norms and perceived behavioral control.[31] In the context of teen pregnancy, an example of subjective norms is male partner disapproval of birth control, linked with the occurrence of a second adolescent pregnancy among adolescent mothers within two years of their first pregnancy.[18]

Finally, PYD addresses the power of protective factors within adolescents and their environments.[32,34] A recent review of PYD constructs provided evidence that increasing cognitive, social and behavioral competence may reduce sexual activity and pregnancy and increase birth control use.[35] Connectedness in almost all domains (family, peer group, school, community, culture) is a protective factor for adolescent sexual risk behavior outcomes.[36] Thus, efforts to strengthen young people's pro-social relationships are a promising strategy to promote adolescent sexual and reproductive health.

Selection of Interventions and Activities Designed to Address Selected Determinants

In developing Project Passport, CenteringPregnancy (CP) was considered as a potential intervention to adapt.[37] CP was developed in 1998 and replaces conventional individual prenatal care with a group-centered model that integrates health assessment, education, and support into a cohesive unit. The effectiveness of the CP model versus traditional care has been studied and positive results have been noted on several outcomes among pregnant women ages 14 to 25 years. These outcomes have included reduced preterm births, increased prenatal knowledge, better preparation for labor and delivery, and greater satisfaction with

care.[38] A recent study assessed the impact of CenteringPregnancy Plus (CPP), an integrated group care model, on psychosocial risk in pregnant adolescents and young adult women.[39] CPP adds HIV prevention components to CP based on previous efficacious interventions. The purpose of the study was to determine the impact of CPP on improving psychosocial outcomes such as stress, self-esteem, social support, conflict, and depression. Results indicated that women who were highly stressed at study entry benefited from the integrated group care; their self-esteem increased, their stress decreased, and their social conflict decreased in the third trimester of pregnancy. Social conflict and depression were significantly lower by one year postpartum. The Centers for Disease Control and Prevention (CDC) identified CPP as a best evidence risk reduction intervention.[40]

Previous research has also found that PYD programs were successful in decreasing high-risk sexual behavior and pregnancy, and increasing contraception use. The PYD approach has influenced a growth in programs nationwide that work to promote qualities or assets such as connectedness, competence, confidence, and character (many of the determinants and/or behaviors are encompassed in our logic model) to improve adolescent sexual and reproductive health outcomes.[41] A 2010 systematic review evaluated PYD programs related to adolescent sexual

and reproductive health (ASRH). Of the 30 programs that met the review criteria, 15 were effective at improving one or more ASRH outcomes. Results of these effective programs varied from moderate to well sustainable and were long lasting in the studied priority populations. Almost all effective programs included the following elements: attempts to strengthen family, school or community contexts; opportunities to build skills through role play or activities; administration of activities in a supportive environment; discussions on the importance of communicating expectations of behavior; and participant recognition for their participation and contributions.[41] Additionally, research suggests that interpersonal contexts that validate the pregnancy, recognize passage through important transitions, and teach boundary-setting skills are effective in reducing depression among pregnant adolescents.[42]

Results: Description of Project Passport Intervention Centering Pregnancy (CP) Integrated with Positive Youth Development (PYD)

Based on the review of the literature, we enhanced the CP program with components from PYD and male involvement. During the prenatal period, this enhanced intervention consists of 10 two-hour sessions that encompass the original CP essential elements, PYD components (competence, connectedness, confidence, and character)[41] and other

determinants identified in our literature review. The format of the sessions integrates prenatal medical checks with a formal curriculum dealing with pregnancy and birth, and includes handouts, worksheets, and skill-building exercises. The groups are facilitated by nurse practitioners and co-facilitated by social workers who are trained in group process. CP provides opportunities for peer support, cohesion, and sustained education without the limitations of time and competing interests common in hospitals and birthing centers. Each of the PYD constructs is addressed in the intervention by specific goals and exercises at each session. For example, session one focuses on competence by discussing nutrition, confidence by establishing personal goals and expectations, and character by emphasizing responsibility for a healthy pregnancy (Table 1).

Table 1: Integration of Centering Pregnancy Program (CP) And Positive Youth Development (PYD)

Session	Centering Pregnancy Content	CP Self-Assessment Sheets	PYD Components (Character, Competence, Connectedness, and Confidence) Worksheets and Exercises
Session 1	• Orientation to the Centering model • Set personal goals and expectations • Responsibility and self-esteem • Nutrition	• *My Prenatal Care: What's Most Important* • *Personal Goals for a Healthy Pregnancy* • *My Weekly Food Pyramid*	• *Assets Inventory* • *Expectations* (Competence) • *Qualities of Responsible People* (Character) • *What is Self Esteem? (*Confidence) • *What I like about me…* (Confidence)
Session 2	• Common discomforts of pregnancy • Good oral health • Revisit responsibility	• *Common Discomforts* • *Oral Health*	• Discussion: How do you raise your level of responsibility? Who are the most responsible people in your life? (Character, Responsibility)
Session 3	• Relaxation and personal care • Breastfeeding	• *Relaxation Measures* • *Thinking About Breastfeeding*	• Discussion: Why is it important to take care of yourself? (Character, Competence)
Session 4	• Family assessments • Techniques to communicate effectively • Learn to deal with support and conflict • Menstrual cycle, abuse issues, safety, contraception	• *Contraceptive Use* • *Keeping Myself Safe and Healthy* • *Family Assessment*	• *If you could be your parent for a day* • *Positive Family Communication* (Character) • *Your Safety* (Character) • *Peaceful Conflict Resolution* (Competence)
Session 5	• Check mental and physical health status • Support by family and outside adults • Begin discussion of birth	• *Self-Inventory*	• *Family Support: Short and Long Term Activities* • *The Ups and Downs of Support* (Connectedness) • *Other Adult Relationships (Connectedness)* • *Caring Neighborhood Activity 2 (Connectedness)*
Session 6	• Discuss labor • Review Personal Goals and barriers	• *Comfort Measures for Labor* • *Personal Goals*	• Discussion: Name things that interfere with your expectations. How can you overcome them? (Competence)
Session 7	• Personal needs during birth experience • Baby care	• *Decisions of Pregnancy* • *Oral Health*	• Discussion: What are some positive experiences you've had helping or caring for someone? (Character)
Session 8	• Relate emotional issues to pregnancy and postpartum • Enhance support by family, outside adults, and friends • Birth issues	• *Personal Assessment*	• *Who Can You Call… Where Can You Go?* (Competence) • Discussion: How do you feel about your neighbors and why? (Confidence) • *Friends and Relationships* • *What is a Real Friend?* (Character)
Session 9	• Plan for postpartum period; share birth stories • Baby care	• *Pregnancy Review Sheet* • *Thinking Ahead*	• Discuss "Assets for Babies" and "40 Developmental Assets" handouts (Competence)
Session 10	• Review plans to take care of oneself and one's baby/family • Develop a positive outlook on the future	• *My Birth Experience* • *All About My Baby*	• *My Future* (Competence) • *Reflections?*

CP contains three target components: assessment, education, and support. Self-Assessment Sheets (SAS) allow participants to voice individual worries and provide guidance to the group facilitators about issues that should be addressed during the sessions. The educational component includes information on nutrition, exercise, relaxation, childbirth preparation, pregnancy problems, infant care and feeding, postpartum issues, communication, self-esteem, sexuality, abuse issues, oral health, and parenting. Parenting skills are also reinforced after delivery through four parenting education sessions (Table 2). Participants receive incentives for session completion. Case managers use text messaging to remind participants to attend sessions. Child care for older children is available.

Table 2: Integration of Postpartum Nurturing Parenting and Positive Youth Development (PYD)

Session	Nurturing Parenting Content (Character, Competence, Connectedness, and Confidence) Worksheets and Exercises	PYD Components
Session 1	• The Philosophy of Nurturing Parenting • Having Appropriate Expectations of Children • The Growth and Development of Infants • Drinking and Parenting Don't Mix; Safety • Review contraceptive choices	• Understand the importance of Nurturing Parenting Practices (Competence, Connectedness)
Session 2	• Developing Empathy: Teaching to Care • Developing Personal Power • Discipline: Setting Boundaries and Limits • Verbal and Physical Redirection	• Red, White & Bruises-discussion about spanking-video (Connectedness)
Session 3	• Rewards & Punishments • Praising Children and Their Behavior	• Self-Awareness, Empathy (Connectedness, Competence)
Session 4	• Establishing Nurturing Parenting Routines • Nurturing Diapering and Dressing Routines • Nurturing Feeding Time Routine • Nurturing Bed Time Routine	• How to set routines in a nurturing way (Connectedness, Competence)

Monthly Case Management and Personalized Follow-Up

This program component is designed to impact the determinants in the logic model related to improving pregnant adolescents' knowledge and skills that are essential for accessing and using medical, social, nutritional, educational, and other resources and services. It is family-centered, community-based, culturally relevant, interdisciplinary, and comprehensive. The initial step includes assessing the client's needs, weaknesses, and strengths. Case managers then work with clients on the

development of a service plan to meet identified needs. A contract signed by participants ensures the completion of the service plan. Using in-person one-on-one or phone encounters, case managers assist clients in identifying resources necessary to implement the service plan. Case managers are also available to provide referrals for additional services, such as counselling for mental health concerns, when indicated.

Father and Family Involvement (Participation in CP and Project Bootstrap)

Expectant fathers are included in Project Passport in order to increase their knowledge and skills related to child development and self-sufficiency, and to enhance their social support for the pregnant teen. Our specific approach to integrating partners stems from our literature review on determinants of healthy behaviors as well as our agency's previous experience in working with males and expectant fathers. Expectant fathers are invited to participate in CP sessions during pregnancy and in the postpartum group sessions. During the implementation of a previous CP program, over 100 African-American and Latino males ages 16 to 34 years (mean age = 20.9) actively participated. In addition, partners are able to take advantage of other programs available for males at the funded agency. One program available for expectant fathers is Project

Bootstrap. Project Bootstrap provides enhanced services to young, low-income noncustodial fathers to assist them in obtaining resources to become responsible parents. The program provides a $1,100 stipend to support educational or vocational training. Project Bootstrap was previously evaluated among 40 young fathers in our clinics.[43] Bootstrap participants had greater levels of participation in workforce development activities subsequent to program entry compared to the comparison group. Case managers also work with expectant fathers on developing a need-based service plan and assist them in meeting those needs, including referrals to educational programs and employment resources. When male partners are unavailable, pregnant teens are encouraged to bring family members to group sessions.

Project Passport Program Evaluation

The intervention is currently being evaluated using a quasi-experimental, parallel group pre-post-follow-up test design, in which groups are formed based on the clinic at which teens receive their pregnancy testing. The comparison group (Standard Care) receives case management services only. The priority population consists primarily of African American and Hispanic pregnant adolescents ages 15 to 18 years who attend family planning clinics, nearby schools, or are recruited by community-based

organizations. The project was approved by the affiliated Institutional Review Board. Established measures for assessing our selected program health outcomes are listed in Table 3.

Table 3. Measurement of Health Outcomes

Health Outcomes	Measurement Tools
Repeat Pregnancy	Self-report of additional pregnancies since delivery
Educational Attainment	Subjects complete a series of questions on highest grade completed, whether they are enrolled in or have completed high school or a GED program, or whether they are currently enrolled in school
Depressive Symptoms	Center for Epidemiologic Studies - Depression Scale (Radloff, 1977), which has been used extensively with pregnant and parenting adolescents.
Intimate Partner Violence	Conflict Tactics Scale-2 (CTS2) (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The CTS2 has scales to measure victimization and perpetration of three tactics that are often used in conflicts between partners: physical assault, psychological aggression, and negotiation, and to measure injury and sexual coercion of and by a partner.
Father of Baby Support	A 6-item scale evaluates the amount of support provided by the baby's father in the areas of financial help, help with transportation, advice, help with childcare, and emotional support. Other questions ask about the type of relationship the teenager has with the father of her baby and how often she sees him.
Infant Immunizations	Participants are asked to bring an up-to-date immunization record printed by their child's doctor. Attendance at well-baby visits is also monitored as a proxy for being up-to-date with immunizations. Finally, mothers are asked directly if their child's immunizations are up-to-date.

Summary and Conclusions

Pregnant adolescents are confronted with many challenges and need services to help them improve outcomes for themselves and their children. Interventions among this priority population are sorely needed as evidence-based interventions are limited, and many of these interventions are time-intensive and therefore costly and difficult to implement.[31] To address this need, we developed Project Passport, a multifaceted intervention designed to provide medical care, support, counseling, and education. A group-level education that engages multiple pregnant adolescents in a single setting could be more cost effective than a home visitation program. This type of approach can be relevant for adolescents who value peer support at this stage of their lives. The intervention also empowers adolescent moms to make healthier choices by increasing cognitive, social, and behavioral competencies, which may ultimately benefit participants in other areas of their lives. Additionally, by including males and family members in the intervention and providing them with necessary services including employment, education, and counseling, women and children will benefit from their support and financial self-sufficiency. Further, the use of a systematic logic model framework helped to ensure the development of a targeted intervention that is more likely to

reduce subsequent teen pregnancy and to promote positive maternal and child outcomes.[7]

Pregnant adolescents face multiple challenges that may compromise their health and birth outcomes. Addressing these issues is vital. This program may help young women develop the competencies and skills they need to promote healthy outcomes. Since such a comprehensive intervention has not been tested in community-based family planning clinics, this approach may provide a model for other similar communities.

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