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Engaging Vulnerable Adolescents in a Pregnancy Prevention Program: Perspectives of *Prime Time* Staff

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Abstract

Introduction—Evaluating interventions for reducing unintended adolescent pregnancy is necessary to ensure quality and efficacy. The purpose of this study was to examine core case management practices and processes for engaging high-risk girls in *Prime Time*, an intensive multi-component intervention from the perspectives of intervention program staff.

Method—Structured individual interviews were conducted with the entire *Prime Time* program staff (N=7) to assess successes and challenges in engaging adolescent girls at high risk for early pregnancy recruited from school and community clinics.

Results—Program staff described different capacities of adolescents to engage with the program (easy, middle and difficult connecting adolescents) and provided specific recommendations for working with different connectors.

Discussion—Findings from this study support the notion that preventive interventions with vulnerable groups of adolescents must pay careful attention to strategies for establishing trusting youth-adult relationships. The ability of staff (e.g., case managers, nurses) to engage with adolescents is a crucial step in improving health outcomes. The identified strategies are useful in helping adolescents build skills, motivations and supports needed for healthy behavior change.

Keywords

Adolescents; Pregnancy Prevention; Intervention

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Introduction

The United States has the highest rates of teen pregnancy and childbearing of all industrialized nations (United Nations, 2006); by age 20, nearly one out of three U.S. females will become pregnant (Kirby, 2007). Further, substantial disparities exist between social groups with disproportionately high pregnancy and birth rates among young women of color (Guttmacher, 2010; Hamilton, Martin, & Ventura, 2009; Martin et al, 2009; Ventura, Amba, Mosher, & Henshaw, 2008). Between 2005 and 2007, birth rates among U.S. adolescents increased by 5% following steady declines over 15 years (Guttmacher, 2010; Hamilton et al., 2009). A recent study suggests that declines in contraceptive use among sexually active adolescent females may be contributing to these increases in teen birth rates (Santelli, Orr, Lindberg, & Diaz, 2009). For instance, in 2007, almost 40% of sexually experienced high school students reported not using a condom during last sex, and only 16% reported using birth control pills (Centers for Disease Control (CDC), 2008). Clearly, high levels of sexual risk behaviors and outcomes, including unprotected intercourse, pregnancy, and childbearing among adolescents pose important public health challenges.

A recent review of adolescent pregnancy prevention programs in clinics, schools, and communities highlights effective youth development approaches to reducing risk behaviors linked to teen pregnancy (Kirby, 2007). Among the most successful programs are multi-component interventions that focus on fostering healthy youth development by promoting sexual and non-sexual protective factors. For example, the *CAS-Carrera* program in New York City was successful in reducing teen pregnancy rates by half among adolescent females for as long as three years (Philliber, Kaye, Herrling, & West, 2002). This long-term program involved teens from early adolescence through the end of high school, included multiple components, provided clear messages about pregnancy avoidance, fostered close relationships between adolescents and staff, and provided access to reproductive health services (Kirby, 2007). Evidence from intensive youth development programs implemented over extended periods of time suggests they can reduce teen pregnancy and childbearing in populations where the prevalence of teen childbearing is relatively high (Gavin et al., 2010; Kirby, 2007).

Engaging adolescents at elevated risk for early pregnancy can be especially challenging. While not a homogenous group, higher risk youth commonly have developmental and situational characteristics that require unique approaches for engagement. Vulnerable youth may have life histories which include problematic relationships with authority figures (Baer, Peterson & Wells, 2004); they may be cynical about adults in helping roles (e.g., social workers, counselors, nurses) as a consequence of past negative interactions (Baer et al., 2004). Evidence suggests that higher risk youth are more likely to fully engage in interventions that promote and acknowledge their strengths and resilience, rather than focusing on their deficits (Arnold, Walsh, Oldham & Rapp, 2007; Bellin & Kovacs, 2006).

Effective youth development programs with vulnerable populations have included case management and peer leadership components (CDC, 1997; Rosenfeld et al., 2000; Tuttle et al., 2000). Trusting relationships with case managers allow vulnerable adolescents the opportunity to address complex psychosocial and emotional issues that underlie health risk behaviors. Further, case managers' relationships with youth incorporate cultural considerations, encourage healthy behavior change and facilitate pro-social peer interactions (Beyene, Anglin, Sanchez, & Ballou, 2002; Herrera, Sipe, & McClanahan, 2000; Jemmott & Jemmott, 2000; Morrow & Styles, 1995). Because peer influence is a central theme of adolescence, structuring pro-social peer influence may be critical to the success of prevention efforts, particularly when young people take on leadership roles (Denner, Coyle,

Robin, & Banspach, 2005; Komro et al., 1996; Perry, 1999). Involvement in peer leadership programming may be especially powerful for vulnerable groups of young people (Forum for Youth Investment, 2003; NYLC, 2005), many of whom have limited opportunities and supports to take on positive leadership roles in their daily lives.

With a growing population of young people (U.S. Census Bureau, 2007) and recent increases in rates of teen pregnancy and childbearing (Guttmacher, 2010), it is clear that we must expand effective approaches to address these important public health issues. In response to the recent increase in teen birth rates, the National Campaign to Prevent Teen Pregnancy (2007) advocated that: "The early wins may have been won. Future efforts may well have to be more intense, focused and creative if the nation is to make continued progress in reducing teen pregnancy and childbearing…Yesterday's way of doing business will no longer suffice." Accordingly, the purpose of this study was to examine core case management practices and processes of *Prime Time*, an intensive multi-component intervention (detailed below), from the perspectives of program staff. Specifically, we examined successes and challenges in engaging adolescent girls at high risk for early pregnancy in case management, with the intent to share lessons learned that may benefit others working with vulnerable youth to reduce unintended pregnancy and foster healthy development.

Methods

Overview of the Prime Time intervention

Prime Time is a multi-component, youth development intervention designed to reach adolescent girls at high risk for early pregnancy who access clinic services. The program aims to reduce precursors of teen pregnancy including sexual risk behaviors, violence involvement and school disconnection by changing environmental, personal and behavioral attributes linked to these behaviors (see Figure 1). The current *Prime Time* randomized trial (2006-2011) (Sieving et al., in press) is among the first to rigorously evaluate youth outcomes associated with clinic-based youth development programming (NRC/IOM, 2009).

Prime Time study participants were sexually active 13-17 year old girls (n=253), recruited from school or community clinics, who met one or more of six clinically relevant risk criteria. Derived from previous research, these risk criteria included: clinic visit involving a negative pregnancy test (Zabin, Sedivy, & Emerson, 1994); clinic visit involving treatment for sexually transmitted disease (Orr et al., 2001); young age (13-14 years) (Kirby, 2001); high risk sexual and contraceptive behaviors (Kirby, 2001); behaviors indicating school disconnection (Manlove, 1998) and aggressive and violent behaviors (Silverman, Raj, Mucci, & Hathaway, 2001; Valois, Oeltnamm, Waller, & Hussey, 1999). Half of participants were randomized to the intervention condition; half to a control condition. Adolescent participants' demographic characteristics and risk indicators at study baseline are summarized in Table 1. Intervention and control groups were equivalent on this set of descriptors.

Spanning an 18 month period, the *Prime Time* intervention included one-on-one case management as well as peer leadership components. Further information about the *Prime Time* study design, intervention components and evaluation methods are detailed elsewhere (Sieving et al., in press).

The overall goal of *Prime Time* case management was to establish a trusting, consistent relationship in which adolescents and case managers worked together to address risk and protective factors targeted by the intervention. With individual case loads of 24-30 participants, case managers attempted monthly one-on-one visits with each adolescent in

their case load during the 18-month intervention. Adolescents were given a $10 incentive for participating in monthly visits. One-on-one interactions focused on several core topics: building skills and expectations for healthy relationships; enhancing motivation and skills for responsible sexual behavior; addressing emotional health needs; and promoting positive family, school and community involvement. Employing a client-centered approach, an individual adolescent's needs guided specific topic areas covered and strategies employed during a given visit. With each adolescent, the goal was to cover all core case management topics over each 6-month interval of the adolescent's involvement in the *Prime Time* program.

Case managers' initial training focused on goals and objectives of the *Prime Time* program as well as principles and practices in promoting healthy youth development. Initial training included practice and feedback on core intervention strategies and activities. Throughout the intervention, case managers received weekly clinical supervision from the intervention coordinator. While they were facilitating their first peer leadership group, case managers also received intensive coaching from the intervention group coordinator.

Staff participants

Study participants included five full-time case managers, the intervention coordinator and the intervention group coordinator for the *Prime Time* randomized controlled trial. Intervention staff were women, between the ages of 22 and 50 years, from diverse ethnic and racial backgrounds. Case managers' educational backgrounds were in health education, psychology, and social work (baccalaureate degrees, n=4; high school degree with vast community experience with adolescents, n=1). Prior to their involvement with *Prime Time*, all had worked with culturally diverse groups of young people, facilitated adolescent groups, and provided at least three years of case management services to adolescent girls at risk for early pregnancy. Case managers in school settings were also required to have teaching experience with adolescents. The intervention coordinator was a master's prepared clinical social worker with extensive experience in youth development and teen pregnancy prevention services and in clinical supervision of staff working with culturally diverse groups of young people. The intervention group coordinator was a master's prepared health educator with extensive experience in youth leadership programming and in supervision of staff facilitating youth leadership groups.

Procedure and instruments

A qualitative descriptive study design using principles of naturalistic inquiry was used to guide this analysis as our goal was to describe *Prime Time* staff's experiences from their perspectives (Sandelowski, 2000). Individual semi-structured interviews were conducted by the first author with all *Prime Time* staff members. The interviews were conducted in a private location at the program office, which supported confidential interviews. Interviews lasted approximately 60 minutes (range 41-80 minutes). All intervention staff consented to participate in this study; study protocols were approved by the University of Minnesota IRB.

With feedback provided by two study investigators, the interview guide was developed in response to the case managers' experiences that indicated adolescents had differing capacities for engaging with case managers. The interview guide was comprised of open-ended questions designed to elicit information about individual variation in case managers experiences working with a group of adolescents, some of whom were easier and others who were more difficult to engage in the intervention. Case managers were asked to think about and describe experiences with adolescent girls in their caseload who fit within each of these categories: (a) those who were easy to engage with (referred to as *easy connectors*), (b) those who took more work to engage with (referred to as *middle connectors*), and (c) those

who were difficult or impossible to engage in case management (referred to as *difficult connectors*). Sample interview questions included: Tell me about a young woman who typifies the *easy connector* type. How did you maintain relationships with *easy connectors* over time? What facilitated changes over time in sexual behaviors for *easy connectors*? Similar questions were repeated for *middle connectors* and *difficult connectors*. Key content areas included benefits and challenges of implementing the *Prime Time* intervention as well as recommendations for working with adolescents with differing needs and capacities.

Data management and analysis

All interviews were digitally recorded and transcribed verbatim. Prior to the analysis, all personal identifiers were removed. Qualitative interview data from the seven transcripts were organized and managed using Atlas ti. 5.0 (Muhr, 2004), a qualitative software program.

Descriptive content analysis strategies were used to identify and describe the range and types of case management practices in working with three types of adolescents (easy connectors, middle connectors and difficult connectors). The first author developed an initial coding scheme based on the content of the structured interview guide to categorize program staff's perspectives of successes and challenges in engaging intervention study participants at different levels of engagement in case management. A second research team member then read the transcripts in their entirety and coded the data to validate the fit and trustworthiness of the coding scheme to the data. The analysis team raters met to review and revise the initial coding scheme (resulting in 17 additional codes and one new emergent category). Next, two raters independently read each transcript on a line by line basis and systematically identified and coded challenges and successes in connecting with easy, middle and difficult to connect with adolescents. Inter-coder agreement between the first two raters was high. The few disagreements in coding were resolved by a third research team member with qualitative expertise who reviewed the coding against the established coding scheme and decision rules established by the research team. Broad categories that emerged from the across case interview data analysis included: (1) recommendations for engaging higher risk adolescent girls, (2) relationship maintenance strategies, and (3) health behavior change (subcategories included the *Prime Time* program goals: sexual risk behaviors, violence involvement, and school disconnection). For each category and subcategory, transcripts were secondarily coded by level of engagement with case managers (easy, middle, and difficult). Trustworthiness of the data was established by checking the accuracy of the coded transcriptions and having more than one rater code the data. An audit trail of the data, coding, and analysis were kept and reviewed by a third rater. Findings from the analysis were reviewed and verified by program staff.

After reviewing multiple potential quotes for relevance and clarity, quotes were selected that best represented the commonalities and individual variation among the case managers' strategies for working with adolescent girls to meet specific program goals.

Results

Connection & Strategies

An analysis of the process of engagement or “connection” revealed three distinct groups within the intervention participants. Adolescents who were easy to engage with by the case managers were classified as *easy connectors*, those who took more effort to engage were classified as *middle connectors*, and those who were difficult or impossible to engage were classified as *difficult connectors*. Recognition of differences among the participants required that case managers tailor their strategies to build trusting relationships and motivate

adolescent girls to actively participate in *Prime Time*. The following sections detail characteristics of adolescents in each group, steps in building a working relationship, and specific recommendations case managers made for working with the adolescents in each group.

Easy Connector—The *easy connector* adolescents were open to building a relationship with their case manager. These participants typically came from homes with a functioning family and some degree of parental involvement and stability. However there was a fairly wide range of adolescent girls in this group, including highly motivated and supported adolescents (e.g., strong social networks), adolescents with more minor issues (e.g., needed/wanted help and connection to an adult), and adolescents with more major issues to address (but not extreme enough to warrant other intervention). This is illustrated by a program staff (PS) who reported:

> Someone easy to connect with is someone who is either in "extreme" crisis and no one else knows it but me so they have kind of been flying under the radar at school and in other programs, or it is someone who is really super motivated and they think that anyone working with them and helping them is great. (PS 1)

Having a prior positive experience with an adult through a youth program or school seemed to ease the connection process:

> I think probably the ones that were easiest to connect with were young women who have been involved in other types of programs already…where they're used to meeting regularly with someone and for whatever reason have shared a lot of their story with people. I think a lot of people that I am thinking of in particular have just been…in youth shelters or are maybe in an independent living program where you work with a case manager a lot and kind of have to put everything out there. (PS 2)

With *easy connectors*, the case managers were able to establish an immediate, empathic relationship that was facilitated by easy access to an adolescent with a desire to communicate and connect with the case manager. This group of adolescents was relatively comfortable with self-disclosure, asking for help, and receptive to the feedback case managers offered.

The case managers offered a variety of recommendations for working with *easy connectors*, noted with examples in Table 2. Three primary recommendation categories emerged. One set of recommendations focused on *setting healthy relationship boundaries with the adolescents*. It was also suggested that case managers *work to build meaningful relationships with the adolescents* (e.g., encourage and validate the adolescent as an individual). For example, one case manager commented:

> With easy connectors it's so easy to fall into the routine of just kind of chatting about life but to just try to continue to take on these topics and push them to grow and move toward bigger and better things every single month. (PS 1)

The final recommendation was to *trust and support adolescents' ability to make decisions* for themselves and help them in establishing relationships with other adults to assist in their current and future decision making processes.

Middle connectors—Compared to *easy connectors*, case managers' connection with *middle connector* adolescents required more time, effort, and persistence (e.g., more telephone calls, higher numbers of missed meetings). The *middle connectors* tended to be more wary of the program and expressed a higher level of discomfort during meetings. Their thoughts and feelings were more challenging to access and assess as they had lower levels of personal disclosure. Chaotic family situations, which frequently led to interactions with

adults from the child welfare or criminal justice systems and a tenuous relationship with school, provided an underlying explanation for some of the distrust and wariness expressed by these adolescents. The process of connecting with *middle connectors* was described by a case manager:

> I think some of these girls have stories that are rough. Or maybe to them, is really embarrassing. Like one girl that now I am very connected with, but in the beginning it took awhile. So maybe like halfway through the time we've been working together we met at her home. And she had never…I didn't hear a lot about her family. So then this time I met there [her house] she has three younger brothers under the age of five, or four even. Just like kind of chaotic household, she has to babysit a lot. She cooks for them. Her mom is kind of here and there. And while we were meeting the electricity shut off in the house and it's kind of—that was kind of the moment that it was like, "Okay, here's my life." You know I could tell that she was just like, "Oh! Are you really seeing it all?" But I think from then on it was like, "Okay you know this stuff and you're still here." (PS 2)

Case managers also observed that the *middle connectors* were adolescents often overlooked by traditional social service programs:

> Because I think middle need kids are missed a lot. They are not bad enough to be really bad. Or they end up in alternative school and then they just sort of flounder or they graduate but they can't really do anything. (PS 3)

Case managers had to actively define their role with the *middle connectors* as these adolescents either lacked prior experience with caring adults for a variety of reasons (e.g., frequent moves, lack of school involvement) or their knowledge of adults was through the lens of mandated relationships (e.g., juvenile justice system).

In some instances, the *middle connectors'* perceptions of the case manager as having a position of authority reflected their underlying need to better understand the role of the case manager in order to become more fully engaged in the program. The case manager needed to clarify that *Prime Time* was not an extension of the school, child protection, or juvenile justice systems and explain that confidential information would not be disclosed to anyone, including parents, without the expressed written consent of the adolescent with the exception of mandated reporting behaviors (e.g., sexual abuse).

In addition, some *middle connector* adolescents had a desire to participate in the program, but their lack of prior experience with programs or groups made participation more exigent. To overcome this discomfort and distrust, it sometimes took a personal crisis (e.g., break-up with a boyfriend, fight at school, conflict with parents) to create a perceived need to reach out and engage with a case manager. In these types of situations, the case manager's ability to 'not be shocked' paved the way for a positive case management relationship. A case manager summarized this progression:

> I think there was just some, there were some that were easier. And it takes something significant for that to happen. Something happens at school and they are really upset and I just happen to be there and they can come and share that experience with me. And maybe you know cry it out or have a real discussion about something. And then it'll be a little easier from then. (PS 2)

There were variations in engagement strategies for *middle connectors* between the school and community clinic program locations. In school settings, establishing a connection with more guarded participants was often overcome by the daily presence of the case manager. As the case manager became part of the school landscape, initial interactions could be brief, casual and non-threatening which provided an opportunity for a wary adolescent to observe

the case manager interacting with others. The opportunity for frequent brief contact within a shared physical space supported the development of relationships with *middle connectors*. On the other hand, connecting with wary *middle connectors* enrolled from community clinic settings provided a different set of challenges, the most obvious being the lack of opportunity for casual interactions. Consequently, meetings between the case manager and the participant were formalized and intentional. The formality of the meetings with case managers often contributed to the adolescents' hesitancy about the relationship. The process of engaging *middle connector* adolescents enrolled from community clinic settings is described by a case manager:

> The first meetings were really sort of uncomfortable, I think that they probably have not been involved in as many programs or mentorship type things or case management. But also really desiring to do something like this and really wanting to get involved in something positive and to do something productive…So the first few meetings with some of these girls in the medium connecting group, it took awhile for them to open up more. So I think kind of those first two meetings were really fragile and I sort of treated them as so. And just really kind of for the first few times, really reminding them that 1) all this stuff is confidential, and 2) you can trust me. Like letting them know—for a few of them I think maybe it was important to let them know that most of the stuff they would probably tell me wouldn't shock me too much. (PS 4)

Unlike the school setting which provided a natural opportunity for participants to get to know the case manager, in the community setting participants frequently 'tested' the case manager in order to decide whether or not to engage in a relationship with the case manager. By demonstrating awareness of the fragility of the relationship, the case manager let the participant have control in the relationship to build trust, while still maintaining healthy relationship boundaries (e.g., the case manager not taking on a parental role).

Case managers noted that critical aspects of connecting with the *middle connectors* included flexibility, the ability to be non-judgmental, and skills in demonstrating comfort with cultural nuances including communication patterns. The four categories of recommendations offered for working with the *middle connectors* are noted in Table 2. These recommendations included: *be patient and acknowledge their life circumstances* (e.g., listen and wait) and a reminder to *keep focused and persevere in developing relationships* (e.g., stay positive and keep trying). Another recommendation was for adults to *be creative in the strategies to engage these adolescents*, for example using MySpace to indicate interest and schedule meetings. In expanding on using creativity, a case manager stated:

> With those middle connectors that was really where I had to use my imagination a lot. To find the things that they might be interested in and then save them until I really needed them [to keep them engaged]. I found that very necessary. (PS 5)

Finally, when working with *middle connectors*, case managers advised *don't take their issues and responses personally* (e.g., not showing up for meetings) as the adolescent girls' behaviors and issues were not reflective of the case manager.

Difficult connectors—The third and final group of adolescent girls was classified as *difficult connectors*. These adolescents tended to be in extreme crisis (e.g., abuse situation, mother deported, parent with HIV diagnosis) or dealing with severe behavioral, emotional, and/or mental health issues underscored by poor family functioning. Due to this level of crisis, the focus of case management shifted to more immediate crisis management and program goals became less salient. There was a low level of trust and most of these adolescents had been involved in some capacity with the 'system' (e.g., juvenile justice, child protective services) which frequently resulted in the girls being inaccessible, for

example being moved to a group home or care facility. Case management meetings were sporadic and the crisis cycle would frequently prevent meetings. The *difficult connector* girls were often independent of parental oversight, along a continuum that ranged from being completely independent, to a middle area of living outside of parental supervision but connected to other relatives and friends, to being supervised by the child welfare system. A typical description of the challenges involved in connecting with this group of adolescents follows:

> Takes a while for them [difficult connectors] to meet the first time—really seeming kind of skeptical about the whole process. Probably some of the girls are girls who move around a lot. And not necessarily homelessness type of move around but—well, yeah, homelessness move around too, but just kind of staying with an aunt one week and then maybe moving to [another city] and living with cousins for a while then coming back, definitely not as connected in school. Some of them I'm thinking of have definitely been in the system, like in the child protection system more often and are probably tired of working with, just with adults in any setting. And, you know, some don't have as much trust. I think its young people who are involved in rough situations. (PS 2)

Establishing a relationship with an adolescent who had multiple stressors in her life required the case managers to persuade the adolescent that study participation had relevance and value to her future. Monetary incentives alone were not relevant enough to induce participation. Trust and self-presentation were much more fundamental considerations in connecting with these adolescents, as the following example illustrates:

> I had this person who I would call so many times. And we would set up so many meetings and this person would not show up. But when we met in person they seemed pretty cool with me. And like again it was just like, “Hey, do you feel comfortable? Do you?— Is there anything I can do?—If you ever feel uncomfortable with anything I say let me know.” She said, “No, no, no it'll be cool” “Do you think you and I'll get together again?” “Yeah, yeah we will.” And I'm like, “Okay that's cool.” Then to set up for the next case management meeting I'd be calling and calling and calling…I don't know just some of them I was never able to connect with them. I will call…But I still remember one of them thought I would come to her school and she's like, “Don't come to my school anymore.” I'm like, “Okay. Is there anything I can do? I mean, did I do something that made you feel uncomfortable? Help me out cause if I don't know. If you don't tell me I will never know.” “No, no, no it's just that my friends think that you're my probation officer.” And I'm like, “Ahh, I'll stop coming to your school then.” And so then they would they laugh and we'd connect like three, four months, and then they would disappear again. (PS 6)

When adolescents came from families that were functioning poorly, or not at all, they were often psychologically inaccessible to case managers. In many cases, a girl's past experience with unreliable adults resulted in distrust and suspicion which seemed to instill an instinct to protect oneself from being hurt or victimized “again.”

> It was really easy to connect with her at the very beginning. But then at the end she completely dropped out and would never return any of my phone calls or nothing like that. And I think that happened because of her mom. She had a really difficult time with her mom and her mom did not want her to get involved in any programs…She started easy and then it was just like completely dropped out. Yeah, a lot of them would just like become really independent, on their own. They just didn't want to be a part of it anymore. They're just like, “I don't want to be a part of this anymore.” The ones, sometimes, who were hard to connect if they had a job.

> Or if they were really, really like very independent on their own stuff. And they did not need anything, you know. Ten dollars [for the incentive] was not a big deal. (PS 2)

The adolescent girls identified as *difficult connectors* demonstrated an inability to attach the relevance of the intervention to their personal lives, despite the efforts of highly skilled case managers. Regardless of persistent efforts to connect, if an adolescent was unwilling or unable to meet with a case manager, participation in the study was limited. It is notable, however, that some *difficult connectors* did eventually engage with *Prime Time* and the case manager in a supportive, working relationship.

There were three primary categories of recommendations the case managers' offered for working with *difficult connectors* (noted in Table 2). The most frequent recommendations were to *be very patient while acknowledging the adolescent's chaotic life circumstances* (e.g., be available, let them develop trust) and *provide useful resources* (e.g., housing information, provide greater incentives for participation). In summarizing her recommendations for working with adolescents who are difficult to connect with, a case manager stated:

> And also I think in the very beginning if you are able to kind of identify that this might be someone that's going to be hard to connect with really just kind of being like, “Let me just share with you the resources I know about”… because you always get a feel at the beginning like this person might really need support or I suspect that they are dealing with a lot of violence in their family so let me make sure that they have a list of shelters or a hotline, you know…even if it's just like a piece of paper with a bunch of phone numbers on it at the very beginning. (PS 2)

This recommendation highlights the importance of acknowledging the different places that adolescents are coming from and being prepared to assist them in any way possible. Finally, case managers advised that it was necessary to *recognize case manager specific issues* in working with difficult connectors, for instance ensuring that professional boundaries were maintained and the limits of the relationship were clearly communicated.

Case managers in both community and school settings had experiences working with easy, middle and difficult connectors. However, there were fewer *difficult connectors* in the caseloads of case managers in school settings, because girls attending school regularly were less likely to disappear and not be reachable. Hard to connect girls in schools tended to be busy or not interested. Case management in the community was much more fragmented as the girls were more mobile and it was easier for difficult connectors to “disappear.”

Discussion

The purpose of this study was to examine core case management practices and processes for working with sub-groups of vulnerable adolescents involved in the *Prime Time* intervention. Case management has been identified as a key component of effective, multi-component teen pregnancy prevention programs (CDC, 1997; Rosenfeld et al., 2000; Tuttle et al., 2000). *Prime Time* case managers have had a high degree of success in engaging with a vulnerable, at-risk group of adolescents. Twelve months into the intervention, participation in case management was high among girls enrolled from school and community clinics, with 84.9% of girls assigned to the intervention condition actively engaged in case management, defined as having three or more visits during their first year with the program (Sieving et al., 2010).

Study findings provide an assessment of the program from the unique perspective of the program staff who discussed challenges and strategies that case managers used to engage

easy, middle and difficult to connect with adolescent girls. In addition, case managers offered specific recommendations about effective approaches and strategies for engaging a vulnerable group of adolescent girls in an intervention to reduce multiple precursors of adolescent pregnancy—sexual risk behaviors, violence involvement, and school disconnection. These recommendations may be beneficial for others working with vulnerable youth to reduce unintended pregnancy and foster healthy development.

Recommendations for establishing and maintaining connections

"Vulnerable" adolescent girls are not a homogeneous group. Previous research suggests that factors promoting engagement may differ within higher risk youth populations (French, Reardon & Smith, 2003). Indeed, in this intervention there was considerable variation among the adolescent girls who enrolled in terms of their initial interest and ability to engage with case managers. Over the course of the intervention, case managers realized that different girls connected and benefitted in different ways from intervention involvement. As such, the case managers offered a variety of useful recommendations for engaging adolescents at differing connection levels—easy, middle, and difficult.

The recommendations for engaging *easy* and *middle connectors* focused on relationship development between the case manager and the adolescent. Case managers reported that relationship development could be facilitated by validating the adolescents as individuals, being creative in utilizing age-appropriate strategies for engagement, and being persistent. In addition, trusting adolescents' decision-making processes and setting healthy relationship boundaries were important to encouraging healthy development. While seemingly straightforward, these recommendations acknowledge the role and skill sets of the case manager in relationship development. For instance, social networking sites are widely utilized by adolescents (Lenhart, Purcell, Smith, & Zickhur, 2010); case mangers' utilization of these sites provided a connection strategy that acknowledged this aspect of youth culture. The recommendations and tools were helpful in moving some *middle connector* girls into more complete engagement with the *Prime Time* intervention.

The strategies for engaging the *difficult connectors* were different than *easy* and *middle connectors* and were more related to case manager interpersonal skills and use of self. For example, patience and not taking it personally when an adolescent's situation made it impossible to connect were noted as essential attributes in working with these girls. The provision of resources (e.g., housing information, mental health services) was important for all adolescents but especially for the *difficult connectors* whose immediate crises could affect their accessibility for future meetings and their ability to engage with broader program goals.

In moving forward, it will be useful to tailor interventions to needs of individual adolescents. Case management strategies that address sexual risk taking, violence involvement, and school disconnection may be appropriate for *easy* and *middle connector* adolescents, while adolescents with more complex issues may be better served by first helping them to access specialized services specific to their immediate needs. In categorizing adolescents, however, it is important not to over-generalize, as we are reminded:

> Well my thing would be to include the people you think will never come because they usually are the ones that come the most often. It's counterintuitive but the girl who has the worst attendance, who has the most chronic [but not extreme] problems, often is the one that you can hook in the most. (PS 7)

Study strengths & limitations

This study is unique in that it provides perspectives on strategies used by case managers in connecting with girls who differ in the ease in which they engaged in case management relationships over time. *Prime Time* case managers' reflections on their experiences working with vulnerable, urban adolescent girls could be useful for others implementing similar youth development intervention programming. The categorization of easy, middle and difficult connectors was useful in determining strategies that worked in engaging girls in this intervention. However, for future programs, these categories and strategies may need to be adapted to the specific context and type of intervention. Further work is needed to identify the connection between the different strategies and positive health outcomes for adolescents.

Conclusions/Implications

While engaging a group of vulnerable adolescents does not, in and of itself, reduce risk behaviors linked to early pregnancy, establishing a trusting relationship is an important step towards building skills, motivations, opportunities and supports to make change (Emmons & Rollnick, 2001; Paterson & Panessa, 2008). Our mixed-methods evaluation strategies will allow us to determine if and how the *Prime Time* program was successful in reducing risk behaviors among sexually active adolescent girls at risk for early pregnancy. We hope that future programs will benefit from the lessons learned through engaging high risk youth in the *Prime Time* intervention.

These findings also have implications for nursing practice with difficult to reach, vulnerable adolescents. A key recommendation for all middle to difficult to engage girls is to be patient, persistent and present in developing a working relationship with high-risk adolescents. Findings from this study reinforce the importance of completing comprehensive health assessments with adolescents that take into account social and environmental influences on teens' ability to engage, such as housing, experiences at school, violence involvement, and other relationships with pro-social adults. During the engagement and assessment phase, nurses and nurse practitioners are also in a prime position to provide answers to pressing questions that adolescents have and to offer tangible health services and referrals to appropriate resources. In any health promotion setting, relationship-building strategies require tailoring encounters to the needs and circumstances of individual adolescents. Nurses may find the recommendations for engaging vulnerable adolescents that emerged from this study useful in establishing trusting relationships that support behavior change and foster healthy youth development.

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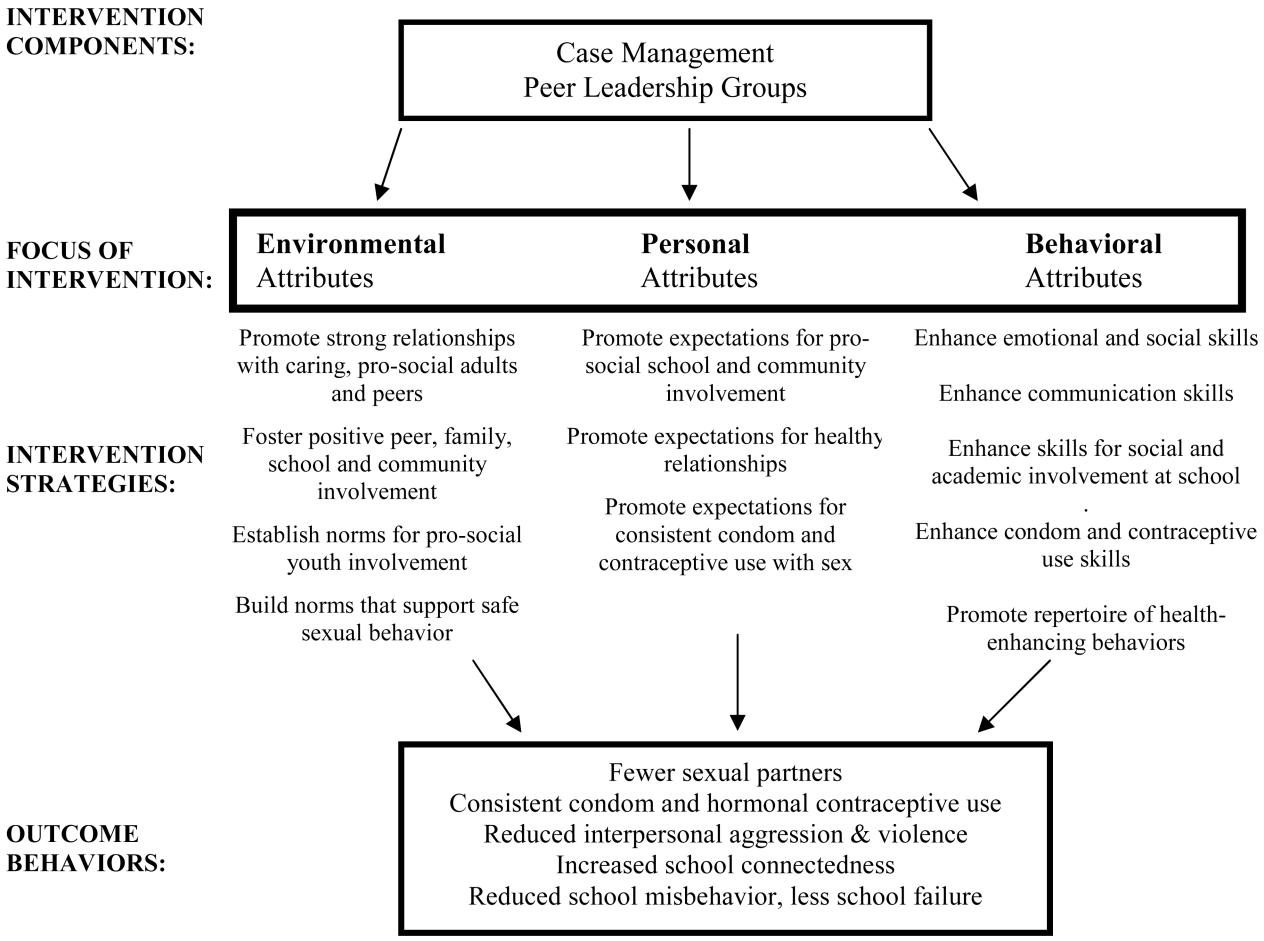

Figure 1. ***Prime Time*** **conceptual framework**

Table 1
Baseline Characteristics of Prime Time Participants (n=253)

	n	%
Age		
13	4	2%
14	46	18%
15	66	26%
16	70	28%
17	67	27%
Race/Ethnicity[a]		
American Indian/Native American	7	3%
Asian/Asian American/Pacific Islander	130	12%
Black/African/African American	104	41%
Hispanic /Latina	31	12%
White/European American	28	11%
Mixed/Multiple	53	21%
# Places lived, past 6 months		
1 place	150	59%
2 places	62	25%
3 or more places	41	16%
# of Adults/Guardians in Home (n=252)[b]		
No adults/guardians	8	3%
1 adult/guardian	114	45%
2 adults/guardians	105	42%
Other arrangements	25	10%
Family receipt of public assistance, past year (n=252)[c]		
Yes	119	32%
No	81	47%
Unsure	52	21%
Currently in school (n=250)	237	95%
# Times changed schools, past year (n=237)		
No changes	142	60%
1 time	48	20%
2 or more times	47	20%
Ever suspended from school (n=251)	175	70%
# Male sex partners, past 6 months (n=248)		
1	164	66%
2	49	20%
3 or more	35	14%
Condom use, past 6 months (n=251)		
Never	30	12%
≤½ time	81	32%

	n	%
>½ time	61	24%
Every time	79	31%
% Did not use hormonal contraception, past 6 months (n=253)	100	40%
% Used or threatened to use a weapon, past 6 months (n=251)	41	16%
% Hit or beat someone up, past 6 months (n=251)	108	43%
% Were hit or beat up by someone, past 6 months (n=251)	70	28%

[a] Mutually exclusive race categories; participants were allowed to select more than one category

[b] Adult/guardian may include biological or adoptive parent step-parent, foster parent, grandparent

[c] "Public assistance" includes welfare payments, M-FIP, public assistance, or food stamps

Table 2

Recommendations for engaging with different types of adolescent girls

Type of connector	Recommendation	n	Example
Easy			
	Set healthy relationship boundaries with them	5	But it was also important with these girls that are so eager to meet that it was hard for me to find boundaries in the beginning. (CM4)
	Work to build meaningful relationships	5	With easy connectors it's so easy to fall into this routine of just kind of chatting about life but to just try to continue to take on these topics and push them to grow and move toward bigger and better things every single month. (CM1)
	Trust their ability to make decisions	4	Trust in their leadership…I feel like they [other adults] really underestimate the teens that we work with. (CM5)
Middle			
	Be patient and acknowledge their life circumstances	3	Just listen and you know just wait for them to come to you. Because they will come around it's just a matter of time. (CM5)
	Keep focused and persevere in developing relationships	7	And just kind of always be ready because I think with the middle connectors if you don't follow through right away they could easily drop off and lost trust quickly. So just be ready to like give referrals or be an advocate or help them along the path. When they're there or they're asking or when they're ready for you, you have to be ready. (CM2)
	Be creative in your strategies to engage adolescents	3	And I think meeting in out in the community is a really good strategy. Picking them up and then going to McDonalds or going to a coffee shop. Going to wherever they want to go instead of your typical home visit. Cause a lot of them don't want me to come to their house. Which is understandable. I mean ((pause)) so you're kind of like on equal ground. And you don't have to worry about someone coming into your home and having thoughts about what's going on in your house. You're just at McDonalds. (CM3)
	Don't take their issues and responses personally	2	Because I am not personally offended if you don't' show up. It's not personal. I think they'll show up when they are ready. And when they are ready is when they'll engage. (CM3)
Difficult			
	Provide useful resources (e.g., housing, mental health)	4	'Cause you always get a feel at the beginning like this person might really need support with housing. Or I suspect that they are dealing with a lot of violence in their family so let me make sure that they have a list of shelters or a hotline, you know. But just kind of presenting these resources, even if it's just like a piece of paper with a bunch of phone numbers on it at the very beginning so you kind of--. (CM2)
	Be very patient while acknowledging their chaotic life circumstances	3	But I think just letting them know that it's okay if you disappear for awhile, I am still gonna be here and when you are ready to talk with me or use the program however you want to use it, we're here. So having the program and you as a case manager being one of those stable forces. (CM2)
	Recognize case manager specific issues (e.g., no connection)	2	Didn't connect at all with these women (CM3)

n = number of quotes endorsing each recommendation