

# A Preliminary Evaluation of an Abstinence-Oriented Empowerment Program for Public School Youth

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*Objective:* This article describes the process and outcomes of an abstinence-orientated empowerment program that was delivered to an adolescent multicultural population. *Method:* The study employed a time-limited pretest–posttest OXO design with an N of 130 drawn from youth in public schools from fifth grade to ninth grade. A paired-samples t test was utilized. Effect size was calculated using Cohen's d. *Results:* Statistically significant differences between the pre- and posttest scores of the treatment group were found for all study variables. Effect sizes were small. *Conclusions:* Outcomes suggest that a psychoeducational approach that is based on a developmental assets model may be a desirable strategy for those working to help teens to reduce high-risk behaviors.

**Keywords:** adolescent; pregnancy; abstinence-oriented sex education; evaluation

Adolescent pregnancy is a serious social problem that contributes to increased health risks for both the pregnant adolescents and their children (Franklin & Corcoran, 2000; Rodriquez & Moore, 1995). In addition to high teen pregnancy and childbearing rates, estimates indicate that sexually transmitted diseases (STDs) are also increasing in the adolescent population (Gans, 1990; Harris, Duncan, & Boisjoly, 2002; U.S. Department of Health and Human Services, 2000).

In response to the growing problems related to sexual activity in adolescence, the Adolescent Family Life Act was established to fund pregnancy prevention programs. This recent attention to and funding of programs to reduce the teen pregnancy rates appears to be working. According to *U.S. Teenage Pregnancy Statistics With Comparative Statistics for Women Aged 20-24* (Henshaw, 2004), adolescent pregnancy in the past decade has been reduced by 28%. Furthermore, the Alan Guttmacher Institute (2006) reports that in the United States, the pregnancy rate

declined by 36% between the years 1990 and 2002. Although this decline is certainly encouraging, there is a paucity of research in peer-reviewed journals reporting on the effectiveness of specific interventions designed to prevent adolescent pregnancy (DiCenso, Guyatt, Willan, & Griffith, 2002; Guyatt, DiCenso, Farewell, Willan, & Griffith, 2000). The absence of information about the effectiveness of abstinence-oriented programs is particularly noteworthy in light of the fact that the federal government spends \$176 million a year on abstinence-only education (Stepp, 2007). This article describes a youth empowerment program, directed toward a multicultural population, and assesses its effectiveness in reducing risks associated with teen pregnancy.

## REVIEW OF THE LITERATURE

The profession of social work, emerging during the later part of the 18 century has a long history of demonstrating concern for reducing teen pregnancy. Jane Addams believed that environmental factors, including teen pregnancy, strongly contributed to the causes of poverty. Her work at Hull House, among other things, included providing education about avoiding out of wedlock births and caring for infants (Koerin, 2003). Social work, as a profession, continues to be involved in designing, implementing, and evaluating pregnancy prevention programs.

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Despite historical and current efforts, information regarding the effectiveness of pregnancy prevention interventions has been inconclusive. Reviews of existing empirical research on teenage pregnancy prevention programs (Scher, Maynard, & Stagner, 2005) indicate that existing studies have varied widely in the areas of sampling plans, analysis strategies, and outcomes regarding the effectiveness of interventions. As a result, little is known about the overall effectiveness of pregnancy prevention programs. More is known, however, about the desired components of such programs.

Research suggests that successful teen pregnancy prevention programs emphasize skills and asset building, including development of communication skills, the need to develop “personal power” and future goals, raise self-esteem, and build strong support from responsible adults (Fischer, 2002). Five factors appear to have a significant impact on teen pregnancy. These include (a) self-esteem (Young, Denny, Spear, 1999), (b) parent–teen attachment (Anderson, 1999), (c) teen–parent communication (Blake, Simkin, Ledsky, Perkins, & Calabrese, 2001; Liberman, Gray, Wier, Fiorentino, & Maloney, 2000; Miller, Norton, Fan, & Christopherson, 1998), (d) parental values toward abstinence (Smith, Harrison, & Springer, 1999), and (e) the teen’s ability to resist peer pressure (Bearman, Brückner, Brown, Theobald, & Philliber, 1999; Monohan, 2002; National Campaign to Prevent Teen Pregnancy, 2004).

### **Self-Esteem**

Waters and Sroufe (1983) describe self-esteem as the theories and beliefs that people have about themselves and their actions. The middle school years, for girls in particular, may be a time of confusion and diminished self-esteem. This lower self-esteem, in turn, may contribute to faulty decision making about risk-taking behaviors and sexuality (Liberman et al., 2000).

The connection between self-esteem and sexual activity was strongly supported by Young et al. (1999). These investigators found higher levels of self-esteem to be significantly correlated to lower likelihood to participate in early sexual intercourse. Other authors (Bamaca & Umaflia-Taylor, 2006), postulate that higher levels of self-esteem may serve as a preventative factor for adolescents in regard to early onset sexuality.

### **Parent–Teen Communication**

Timing and content of communication appears to be a variable in the type of impact that parents have on the sexual behavior of their adolescent children. Miller et al. (1998) report that teens whose mothers discussed health

and safe sexual practices with their children were significantly more likely to not participate in unprotected sex. This pattern of low-risk sexual behavior appears to have a major impact on the youths well into adulthood. Conversely, Davis and Friel (2001) found a positive relationship between high parent–teen interaction and likelihood for sexual activity among young teens.

### **Parental Values About Abstinence**

Parental values, transferred through attachment and communication, have also been found to have a significant impact on the sexual behavior of adolescent youth (Smith et al., 1999). Weinstein and Thorton (1989) were among the first to conduct research on the impact of parental values on their adolescent children. They hypothesized that youth with close relations with their parents would be more likely to share their parents’ attitudes toward premarital sex. Findings from a probability study of 888 mother child pairs of Caucasian women supported their hypothesis.

Over the past two decades, numerous additional studies have indicated that parental values favoring sexual abstinence are significantly correlated with reduced teen pregnancy risk (Miller et al., 1998). More recently, Regnerus and Luchies (2006) found that girls who have close relationships with their fathers are less likely to engage in early sexual behaviors.

Much has been written about the general impact of peer groups in adolescence and the impact of peers on adolescent sexuality (Kinsman, Romer, Furstenberg, & Schwarz, 1998; O’Donnell, Myint, O’Donnell, & Stueve, 2003). This research reflects the underlying belief that peers play a critical role in influencing the decision making of teens. Per social influence theory (Hampton, McWatters, Jeffery, & Smith, 2005) peer norms have been linked specifically to explain the onset of adolescent sexual activity (Connolly & Johnson, 1996; Romer et al., 1999) and other high-risk behaviors (Santor, Messervey, & Kusumakar, 2000).

Findings have linked peer pressure initiation of high-risk behaviors in both male and female adolescents. The literature suggests that the ability to resist peer pressure may delay early sexual activity.

### **Parent–Child Attachment**

The literature is replete with research that has successfully correlated parental warmth and support, and attachment with reduction in high-risk adolescent sexual behaviors such as sexual promiscuity, teen pregnancy, and unprotected sex (Dittus & Jaccard, 2000; Jaccard,

Dittus, & Gordon, 1996; Miller, 2001; Resnick et al., 1997). With few exceptions, the existing research strongly indicates that parent-child closeness is related to postponement of sexual activity among both male and female teenagers (Miller, 2002). The early trust that develops between the mother and her child serves as a model for future relationships. According to attachment theory, children whose parents exhibit caring, close contact with their children allow them to grow healthy “wings and roots” that will allow them to forge appropriate and productive relationships with others. Conversely, unresponsive and uncaring parental behavior is likely to result in children growing up feeling insecure and unable to develop intimate relationships.

Research on adolescent girls, in particular, suggests that lack of warmth from parents may contribute to symptoms of depression that, in turn, may result in increased promiscuity and other high-risk sexual behaviors (Meschke, Batholomae, & Zentall, 2002).

According to attachment theory, children whose parents exhibit unresponsive and uncaring behavior may grow up feeling insecure and unable to develop intimate relationships. These children are also at high risk for internalized or externalized behavioral problems such as high-risk sexual behaviors (Ainsworth, 1982; Bowlby, 1969). Sieving, Eisenberg, Pettingell, and Skay (2006) reported that secure mother-child attachment was significantly associated to delayed onset of sexual intercourse.

## THEORETICAL FOUNDATIONS

Studies consistently reveal that successful initiatives to address teen pregnancy should utilize multiple strategies from multiple sources and have strong adult, community, and youth skills development (Blyth & Leffer, 1995; Brewster, 1994; Brewster, Billy, & Grady, 1993; Philliber & Namerow, 1995; Zimmerman, Sprecher, Langer, & Holloway, 1995).

The intervention described within is based on two theoretical perspectives: (a) the 40 developmental assets model of the Search Institute (2004), and (b) a psychoeducational approach to behavior change.

The 40 developmental assets model presents 40 resources; concrete, positive experiences and qualities that can have an influence on young people's lives. The belief that underlies the developmental assets model is that certain environmental assets have the power to protect youth from many different harmful and unhealthy choices. The developmental assets model proposes that the more of the 40 assets youths have, the less likely they are to get involved in at-risk behaviors such as early

sexual activity, violence, and alcohol and drug use. Unfortunately, research indicates that the average young person surveyed experiences only 18 of the 40 assets (Search Institute, 2004). Ideally, all youth would experience at least 31 of these assets. Per the developmental assets model, empowering school-aged children with skills that help them make positive choices and feel better about themselves helps to prevent behaviors such as early sexual activity.

Psychoeducational intervention perspectives are rooted in the principles underlying cognitive behavioral theory. The primary purpose of the intervention is to change cognitions through increased knowledge and thus change unhealthy behaviors (Pomeroy, Kiam, & Abel, 1999). A comprehensive psychoeducational parenting group can be effective in changing parenting attitudes and beliefs, which suggests an ultimate improvement in health promotion and disease prevention in adolescent women and their children (Abel, Greco, Hummel, & Snyder, 2005).

In 2001, Kirby identified common characteristics of effective curriculum-based psychoeducational pregnancy prevention programs. Per Kirby, pregnancy prevention programs initiated Best Practices curricula that (a) focus on specific behavior, (b) are theoretically based, (c) provide clear messages regarding STDs and pregnancy, (d) provide basic rather than detailed information, (e) address peer pressure, (f) focus on communication skills, (g) include interactive activities, (h) are age and culture sensitive, (i) last 14 or more hours, and (j) have carefully trained leaders.

Accordingly, the model implemented and evaluated within this article is guided by the developmental assets framework and employs a psychoeducational approach to intervention. The model has also been designed to meet the criteria for Best Practices put forth by Kirby (2001).

## DESCRIPTION OF THE PROGRAM

FAME (Family Action Model for Empowerment) is a multidimensional school and community-based program with two primary goals: (a) promoting and strengthening healthy family functioning, and (b) increasing the awareness of sexual abstinence as a positive choice for youth.

The program serves children and/or adolescents and their families in numerous community-based venues. It targets two specific zip code rural areas that have the highest teen birth rates in the tri-county area of a southeastern state. The agency sponsoring the program has

already established an outreach presence in this area. Participants come from a variety of ethnic and racial backgrounds including African American, Latino and Latina, Haitian, Asian, Mixed Race, and Caucasian. Youth participants are students enrolled in grades five through nine.

The intervention dosages for the youth component of the program are provided in 1-hour sessions in two primary formats: (a) an 8-week curriculum administered within the public school system given in a psychoeducational format, and (b) an after-school program that continues for eight sessions that also employs a psychoeducational model and art, music, dance, group activities, role-play, audiovisual aids, and written materials are included in all of the aforementioned venues.

Content focuses on asset building, parent-teen communication and relationships, self-esteem, healthy relationships, dealing with peer pressure, and the benefits of valuing sexual abstinence. The program is designed to strengthen family systems by providing youth with educational enrichment while at the same time providing parent education workshops to support parent-teen interaction. This article focuses only on the youth component of the program. The ultimate goal of FAME is for parents and teens to develop more open communication, be able to discuss healthy relationships and sexual relationships, and for both the parent and child to value the choice of abstinence.

## METHOD

### Design

The study employed a time-limited pretest-posttest OXO design with an  $N$  of 130, drawn from youth in public schools grades five through nine. There was no comparison or control group. Study instruments were completed on the first and last day of the group intervention. Only youths who completed both the pretest and posttest were included in the study sample.

### Study Sample

The sample ( $N = 130$ ) was drawn from the public school system in targeted zip code areas. Eighteen 8-week intervention groups composed the intervention. Participants came from a variety of ethnic and/or racial backgrounds including African American, Latino and Latina, Haitian, Asian, Mixed Race, and Caucasian.

### Variables

A time-limited psychoeducational group intervention was provided to FAME youth in grades five through

nine. The intervention served as the independent variable of the study. Dependent variables include reported (a) self-esteem, (b) ability to resist peer pressure, (c) parent-teen communication, (d) parent-teen attachment, and (e) parent-teen attitudes toward abstinence. Pretests were completed in a group setting on the first day of intervention and posttests were given, again in a group setting, on the last day of the treatment.

### Study Hypotheses

The study proposed the following hypotheses:

*Hypothesis 1:* There will be an increase in test scores from pretest to posttest among treatment group participants in the area of reported self-esteem.

*Hypothesis 2:* There will be an increase in test scores from pretest to posttest among treatment group participants in the area of reported ability to resist peer pressure.

*Hypothesis 3:* There will be an increase in test scores from pretest to posttest among treatment group participants in the area of reported communication with parents.

*Hypothesis 4:* There will be an increase in test scores from pretest to posttest among treatment group participants in the area of reported attachment to parents.

*Hypothesis 5:* There will be an increase in test scores from pretest to posttest among treatment group participants in the area of reported attitudes toward abstinence.

### Study Instruments

Prior to the administration of any of the study instruments, a study protocol was submitted to and approved by an institutional review board. Informed consent was secured from the parents and assent was secured from youth. Consent forms and completed study instruments were kept in a locked and secure cabinet at the Program's sponsoring agency. Data were handled in a manner that protected participant confidentiality and anonymity.

The study instruments administered to youth collected information about (a) participant characteristics, (b) intent to abstain from sex, (c) self-esteem, (d) peer relations, (e) and parental relations. Selected items from existing standardized scales with known reliability and/or validity were employed to assess areas c, d, and e.

Three items from Rosenberg's (1965) Self-Esteem Inventory (RSES) were used to measure changes in youths' feelings about themselves. RSES is a 10-item self-report scale. It was designed to be a simple and useful measure of global self-esteem. Responses to inventory items are made on a 5-point Likert-type scale and range from 1 (*never true*) to 5 (*always true*). Scores are obtained by summing responses to all items. Higher scores are indicative of the higher global self-esteem.

This scale was normed on a sample 4,600 students from 11 public high schools in New York State (Rosenberg,

1968, p. 297). The youth in Rosenberg's (1965) study were diverse in terms of ethnicity. Rosenberg reported a reliability score of .93.

Process evaluations of the project indicated that the youth did not understand seven of the items on the scale. As a result, the scale was reduced to the three items that the youth clearly and consistently understood. These items were (a) "I like myself," (b) "I have a number of good qualities," and (c) "I am proud of myself." Alpha levels for each of these questions ranged from .75 to .87.

The resistance instrument, developed by project staff, was used to measure changes in the youths' knowledge of how to resolve conflicts and deal with peer pressure. Youth ability to communicate with parents was measured using questions from the Quality of Parent Adolescent Communication (Peterson, Southworth, & Peters, 1983). This measurement was normed on a longitudinal subsample of 253 participants. The measure, which uses a Likert-type scale, shows good reliability, as indicated by coefficient alpha of .86. In addition, data from several sources of more recent studies indicate that this scale is valid (Miller et al., 1998).

Five items adapted from Miller et al. (1998) were employed to measure changes in the youths' intentions to abstain from sex. These items have an alpha coefficient of .85.

To measure changes in the parents' communication with their child and/or children, the youth responded to two instruments (do I matter and adolescent communication) and the parents completed the communication of variables instrument. The Cronbach alphas obtained for the matter to mother (pretest = .81; posttest = .92) and the matter to father (pretest = .96; posttest = .97) and the communication instruments suggest these instruments are internally consistent.

## RESULTS

For data analysis purposes, scores for the 18 intervention groups were aggregated. Initial data analysis assessed the categorical data and demographic characteristics of the study sample ( $N = 130$ ). A profile of the sample can be found in Table 1.

The youths' self-report of their use of the free or reduced lunch program served as a proxy for their family's economic status. In this, 75 of the youth received free lunches and 18 received reduced-cost lunches.

Data collected from 130 youth who participated in the treatment groups were reviewed and analyzed to assure that missing or intentionally duplicitous responses were removed from the data set. In all, 36 data files were

**TABLE 1: Demographic Characteristics of Sample**

| Characteristics                            | Treatment Group |           |          |
|--|-----------------|-----------|----------|
|  | <i>M</i>        | <i>SD</i> | <i>n</i> |
| Age  | 11.39           | 0.83      |          |
| Gender                                     |                 |           |          |
| Female                                     |                 |           | 51       |
| Male                                       |                 |           | 72       |
| Unreported                                 |                 |           | 7        |
| African American<br>(Black, not Hispanic)  |                 |           | 4        |
| Asian American                             |                 |           | 2        |
| American Indian                            |                 |           | 3        |
| European American<br>(White, not Hispanic) |                 |           | 11       |
| Haitian, Jamaican, etc.                    |                 |           | 2        |
| Hispanic or Latino                         |                 |           | 47       |
| Pacific Islander                           |                 |           | 1        |
| Puerto Rican                               |                 |           | 43       |
| Other                                      |                 |           | 13       |
| Unreported                                 |                 |           | 4        |

NOTE:  $n = 130$ .

removed in this process. Data gleaned from the remaining youth ( $n = 94$ ) were used to evaluate the efficacy of the FAME intervention.

A paired-samples *t* test was calculated to compare the mean pretest scores to the mean posttest scores of the youth participants. Effect size was calculated using Cohen's *d*. Statistically significant differences between the pretest and posttest scores of the treatment group were found for all study variables. Findings are displayed in Table 2. As can be seen from Table 2, all of the five study hypotheses were supported. The change in scores from pretest to posttest suggest a positive association between the intervention and participant attitude change. Effect size, however, suggested small relationships.

## DISCUSSION AND APPLICATION TO SOCIAL WORK

The findings of this study suggest that the FAME Project may be having a positive impact in promoting and strengthening family functioning for the youth who completed the intervention. However, findings must be viewed cautiously. Although the differences in the youths' self-report from pretest to posttest, regarding their intention to abstain from sex, were statistically significant, low effect size relationships suggest that the impact of the intervention may, in fact, be small. In addition, inherent weaknesses of the simple OXO of the evaluation design limit the ability to conclude that the program actually changed participant behaviors. Given the exploratory nature of this research, findings may still

**TABLE 2: Paired-Samples Differences From Pretests to Posttests**

| Item                                 | <i>n</i> | Pretest  |           | Posttest |           | <i>t</i> | Sig. (Two-Tailed) | Effect Size |
|--------------------------------------|----------|----------|-----------|----------|-----------|----------|-------------------|-------------|
|                                      |          | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |          |                   |             |
| Abstain from sex                     | 86       | 0.767    | 0.43      | 0.896    | 0.31      | -2.47    | .015*             | .16         |
| Overall self-esteem                  | 94       | 12.02    | 2.9       | 17.06    | 19.7      | -2.50    | .014*             | .17         |
| Overall ability to resist            | 93       | 3.91     | 2.02      | 9.67     | 21.5      | -2.55    | .012*             | .18         |
| Overall—matter<br>to mother          | 93       | 45.41    | 10.12     | 50.77    | 15.8      | -2.98    | .004*             | .28         |
| Overall—matter<br>to father          | 91       | 42.26    | 13.6      | 49.79    | 18.56     | -3.39    | .001*             | .23         |
| Overall communication<br>with mother | 90       | 15.6     | 4.16      | 19.84    | 19.49     | -2.05    | .043*             | .15         |
| Overall communication<br>with father | 90       | 14.57    | 4.36      | 20.92    | 23.2      | -2.50    | .015*             | .19         |

\* $p < .05$ . \*\* $p < .005$ .

be helpful in expanding the knowledge base regarding the effectiveness of abstinence-oriented programs.

The increases in the positive responses from pretest to posttest may also suggest that the FAME program may be enhancing youth self-esteem and the ability to resist peer pressure. As both low self-esteem and peer pressure have been positively correlated with high risk sexual behavior among adolescents, these findings suggest that the FAME program may be providing a level of “prevention” that is helping the treatment youth to avoid risky behaviors. In the area of strengthening families, findings suggest that the youth program supports and strengthens the communication and interpersonal connection between the youth and their parents. Youth participants in the FAME treatment reported feeling that they mattered to their parents at a significantly higher level than at posttest. Similarly, youth who completed the FAME intervention reported higher levels of parent-child communication than at pretest. Although these findings are encouraging, the results must be viewed with caution given that this is a pilot study with numerous design and methodological vulnerabilities.

Although all of the dependent variables used to measure youth-parent (a) open communication, (b) attachment, and (c) appreciation of the choice of abstinence seemed to be affected by the treatment, the study is potentially vulnerable to instrumentation problems. Despite the fact that the project employed previously validated scales, not all items of these scales were used for data collection. This may reduce the reliability of the scales. Furthermore, the fact that the project facilitators themselves distributed and collected the study instruments may have biased the outcomes. Demand characteristics, social desirability, and placebo effects may also account for changes between pretests and posttests.

Although this pilot study has design weaknesses, it provides valuable insights in light of the limited knowledge

base that surrounds the effectiveness of abstinence-oriented intervention. The findings from this investigation provide several implications and directions for social workers providing services to high-risk adolescents. Outcomes suggest that a psychoeducational approach that is based on a developmental assets model may be a desirable strategy for those working to help teens make positive choices about their lives. Short-term psychoeducational group intervention allows for practitioners to deliver the “healthy choices” message to a large cross-section of youth. Given the high percentage of Latino and Latina youth participating in the program, the model may be especially useful to others working with multicultural populations. The FAME model is replicable (Abel et al., 2005). Other practitioners can employ the curriculum, suggested approaches and activities, and can also retest the effectiveness with their own evaluation.

Although this pilot study gives some encouraging directions to those working with high-risk youth, results must be viewed in light of the limitations of the design and methodology. First this study relied heavily on participant self-report. Although self-reports are useful for capturing participant attitudes and behaviors, they are inherently not completely objective. Second, the same staff that actually delivered the treatment content administered data collection instruments. This could have biased the responses. Third, the weakness of using a pretest-posttest design is that there is no control or comparison group for measuring effectiveness of outcomes. Effect sizes, as previously noted, were relatively weak. These limitations lessen the study’s robustness. Last, given that the study employed a convenience sample, results are not generalizable.

The FAME model is soundly based in theory, utilizes a replicable psychoeducational intervention, and adheres to recommendations for “best practices.” Although this

study yields no specific evidence that teenage sexual activity, pregnancies, or STDs were reduced by FAME, the FAME Program appears to have accomplished much in its efforts to support families and decrease risky behaviors among teens. Findings indicated that self-reported intentions were improved, as were self-reported measures of self-esteem and parent–teen relationships.

The limitations of an OXO design, although understandable in light of the practical barriers to stronger designs in “real world” practice, weaken the ability of the investigators to draw causal inferences. To address these limitations, the authors are working with the FAME project staff to add both a comparison group strategy and a follow-up protocol to their evaluation design.

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