

Three-Month Evaluation Results of TRAIL, An Abstinence-Based Adolescent Pregnancy Prevention Program

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Introduction

TRAIL (Teaching Responsible Actions In Life) is a five-dimensional middle school program aimed at preventing adolescent pregnancies. The program dimensions are: (1) a 24-session curriculum focused on understanding risk behaviors and developing communication and decision-making skills; (2) academic tutoring; (3) a summer experience in community service, employment, or structured recreational activities; (4) support groups to help develop long-term career and life goals; and (5) peer education and mentoring from senior high students to reinforce the abstinence choice. Literature on adolescent pregnancy prevention suggests that multi-dimensional programs, such as TRAIL, which include not only education on reproductive health but also provide high expectations for behavior, exposure to positive norms, and opportunities to develop social problem-solving skills, are more effective than education alone. The question addressed in this program evaluation is if statistically significant differences occur between students who participate in TRAIL and those who do not on the outcome variables of: (1) knowledge of reproductive health; (2) knowledge of risk behaviors; (3) knowledge of effective communication strategies; (4) attitudes toward teen parenting; (5) attitudes toward teen sexuality; (6) reports of self-efficacy to refuse sexual intercourse; and (7) intent to remain abstinent.

Methods

A quasi-experimental, two-group repeated-measures design is being used to evaluate program effectiveness. The program is offered in a grades-6-through-8 public middle school located in a county where the teen pregnancy rate ranks 29th out of the 100 counties in the state; also, the county has the highest minority teen pregnancy rate—34 percent higher than the state's average. Teachers and guidance counselors select students for the two groups, striving to include in both groups similar variation in ethnicity, socioeconomic status, academic success, involvement in sports and extra curricular programs, and risk for teen pregnancy. A questionnaire is administered to the intervention group before the education curriculum, and 3 months and 12 months after curriculum completion and to the comparison group once during the school year, and 3 and 12 months later. The questionnaire assesses demographics and information on variables reported to

be associated with teen pregnancies (grades, educational aspirations, smoking status, use of alcohol, parental education), as well as data on the outcome variables. The Mann-Whitney Test and chi-square were computed to determine statistical differences between the two groups on the outcome variables.

Results

To this point in year 3 of the project, 245 students have provided baseline and 3-month data, 155 of them in TRAIL and 90 others as controls. Student characteristics were compared at baseline for statistically significant differences between the two groups. No significant differences existed on student age, grade in school, with whom students lived, parent educational attainment, student educational aspirations, grades, or tobacco and alcohol use. However, females ($p=.000$) and particularly African-American females ($p=.006$) were more predominant in the intervention group.

Concerning outcome variables, on the pretest, no statistical difference was found on knowledge of reproductive health between the two groups ($p=.07$). However, on the 3-month test, the TRAIL students demonstrated significantly more knowledge of reproductive health than those in the control group ($p<.000$). More specifically, 34.2 percent in the TRAIL group got all four items on reproductive health correct, in contrast to only 3.3 percent of the students in the control group. At the other extreme, 43.3 percent of the students in the control group answered none of the items on reproductive health correctly, in contrast to only 9 percent of the TRAIL group.

On the pretest, no statistical difference was found on knowledge of risk behaviors between the intervention and control groups ($p=.40$). However, on the 3-month test, the TRAIL students demonstrated significantly more knowledge of risk behaviors than those in the control group ($p<.000$). More specifically, 41.3 percent in the TRAIL group got all three items on risk behavior correct, in contrast to only 2.2 percent of students in the control group. At the other extreme, 26.7 percent of the students in the control group answered none of the items on risk behaviors correctly, in contrast to only 9.7 percent of the TRAIL group.

On both the pretest ($p=.008$) and 3-month posttest ($p=.03$), students in the TRAIL group indicated significantly more confidence in their ability to refuse sexual intercourse. On the pretest, no statistical difference was found on effective communication between the intervention and control groups ($p=.42$). However, on the 3-month test, significantly more TRAIL students answered the communication item correctly ($p<.000$). On the pretest, no statistical difference was found on attitude toward teen parenting between the intervention and control groups ($p=.07$). However, on the 3-month test, the TRAIL students demonstrated a significantly more negative attitude toward teen parenting ($p<.000$). On the pretest, no statistical difference was found on attitude toward teen sexual behavior between the intervention and control groups ($p=.21$). However, on the 3-month test, the TRAIL students demonstrated a significantly more negative attitude toward teen sex ($p<.000$).

It is interesting to note that over the 3-month period, students in the control group developed a more positive attitude toward teen sex, while TRAIL students developed a more

negative attitude. Students were asked two questions about their intent to abstain from sexual intercourse, one during middle school and the other during high school. On the pretest, there were no significant differences between the TRAIL and control groups in their intent to abstain in either middle school ($p=.08$) or high school ($p=.17$). However, on the 3-month test, significant differences existed between the two groups for both middle school ($p=.01$) and high school ($p=.008$). To illustrate, 70.3 percent of the students in the TRAIL group strongly agreed that they intended to remain sexually abstinent during middle school in contrast to 47.8 percent in the control group. Also, 54.2 percent of the students in the TRAIL group strongly agreed that they intended to remain sexually abstinent during high school in contrast to 33.3 percent in the control group. On the pretest, students in the TRAIL group indicated significantly ($p=.008$) more confidence in their ability to refuse sexual intercourse with their partner and this trend continued on the 3-month testing ($p=.03$).

Discussion

The 3-month evaluation data suggest that TRAIL is effective in imparting knowledge and changing attitudes associated with the prevention of adolescent pregnancy. However, these results must be interpreted with caution. At the 3-month data collection point, students have not yet completed all five dimensions of the TRAIL intervention. It will be essential to learn if the differences between the two groups continue to the endpoint of program evaluation at one year. Also, several methodological limitations require consideration. Students are not randomly assigned to the two groups, leaving room for selection bias. The school staff insisted on maintaining control over group assignment. Also, group assignment is not blinded; TRAIL is viewed as a desirable program, and thus possible bias from the Hawthorne effect exists. And, because both groups attend the same school, the possibility for group contamination exists, with the TRAIL students potentially sensitizing other students to important issues.

