The Juvenile and Adolescent Substance Abuse Prevention Program: An Evaluation

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The Juvenile and Adolescent Substance Abuse Prevention Program (JASAP) is a curriculum-based prevention and health promotion program for youth between the ages of 13 to 18 years in Fulton County, Georgia. The program was established in 2007 to promote healthy decision-making skills that would eventually lead to informed choices and decisions surrounding drug and alcohol use. Program evaluation assessed the cognitive and behavioral impact of the program — how program participation had changed prior knowledge, and the processes and outcomes related to making decisions about drug and alcohol use and how this was reflected in behavioral measures. The following scales were utilized in addition to other survey questions: (a) Stages of Change and Readiness Ruler (Prochaska & DiClemente, 1982); (b) Decisional Balance Worksheet for Pros and Cons Assessment (Prochaska & DiClemente, 1984); (d) Self-efficacy scale (Bandura, 1977); and (e) An adapted version of Robinson et al. 's(2001) assessment of substance abuse education. Demographics from the database (n=407) indicated an almost even distribution of males (57%) and females (43%). Majority of the students reported being exposed to alcohol and drugs in their homes and/or community. All reported they had learned something about drugs and alcohol at school. And a majority of the students reported that they had at least 2 people who they could talk to about anything. Pre post tests assessed knowledge gain and attitude change (n = 246). Knowledge was tested using the same test as the pretest and another equivalent test. The equivalent test was administered as a post test. Results indicated that the knowledge on the similar pretest increased significantly after the educational program, t (205)= -3.03, p =.001 (Mean= 11.32) to the post test (Mean= 12.68),. Scores on the equivalent test of knowledge about alcohol and substance abuse revealed that participants scored an average of 9 points out of a total of 12. Also, although non significant, the attitude about alcohol and drugs improved from the pretest (Mean= 3.63) to the post test (Mean= 3.84). Students rated their instructor and course positively, and strongly agreed with the statement that they knew significantly more about substance abuse than they did before they took this course. Students identified the same number of pros and cons (2.0) for changing behaviors and reported their readiness to change their problematic behaviors (6.9 on a 10-point scale). Problematic behaviors identified by most of the children included attitude, anger, and specific behaviors. Participants' decision-making skills regarding alcohol/drug abuse were also evaluated. Results indicated that the majority of the participants (94%) made significantly more healthy decisions (Decision scenario 1, χ^2 (1, n= 92)=85.172). Furthermore, participants were asked to indicate if they have considered career options and higher education. Participants reported a higher confidence in future decisions: Jobs, χ^2 (2, n = 102) = 23.011, p < .001; Education, χ^2 (2, n = 102)=20.176, p < .001. Thus overall the JASAP program was successful in attaining its goals. Continued funding for this intervention is thus deemed crucial!

Today, statistics indicate a sudden increase in drug and alcohol abuse prevention programs in the school systems of the United States. This increase in drug prevention programs has been triggered by the increase in drug and alcohol use by adolescents between the ages of 12-17 years of age. According to the Youth Risk Behaviors Survey (YRBS), from the years 1991 to 1999, lifetime marijuana and cocaine use increased each year by a mode of ±2.5% among American students in the 9th to 12th grades. Between the years 1999 to 2005, the lifetime use of both drugs decreased, but the decrease of current cocaine use (use within the 30 days prior to the survey) did not begin until 2001. Illegal steroid use increased among this same age group during the years of 1991 to 2003, and a decrease was seen from 2003 to 2005. As the new millennium begins to take shape, the use of illegal drugs has decreased and the question is, is it due to the increase of youth drug and alcohol prevention programs? Several studies have tested the effectiveness of these programs and the Juvenile and Adolescent Substance Abuse Prevention (JASAP) program of Atlanta, Georgia is one of these effective programs.

Belgrave, Reed, Plybon, and Corneille (2004) used the Specific Event Drug and Alcohol Refusal Efficacy Scale (SEDARE) to measure the effectiveness of a drug abuse prevention program for urban African American girls. The SEDARE was used to show the probability of drug use among these girls in certain situations. The situations in which the girls viewed themselves as being able to refuse drugs and alcohol varied; but of the 92 girls that participated, the girls in the intervention group had a higher drug and alcohol refusal rate as measured by the SEDARE than the girls in the control group. According to the study, 67% of the intervention group stated that they could refuse drugs and alcohol as opposed to the 33% of the

comparison group who stated that they could refuse drugs and alcohol in the same situation. Most of the situations that were measured by the SEDARE were associated with peer relationships.

With Project KICK (Kids In Cooperation with Kids) Rollins, Rubin, and Wright (1999) used the community partnership, drug education, parent involvement, and peer counseling to evaluate the effectiveness of this program versus the programs that are only taught in the schools. Elementary school students from a mid sized southeastern city in Florida were the actual participants, and seventh graders served as the peer mentors to two classrooms of third graders. The Curriculum used for project KICK is composed of nine units that the students will master upon completion. The Questionnaire used by Rollins et al(1999) measured attitudes related to substance abuse, teenage pregnancy prevention, school attitudes, aggressive behavior, and stress reduction. The purpose of this program was to not only provide substance abuse prevention and education, but also to create a support base within the community where the pressure to try alcohol and drugs is lessened.

In 1993, Ellickson, Bell, and McGuigan did a longitudinal study over six years that achieved reduced drug use during the years of junior high school. The curriculum used consisted of eleven lessons and was tested in 30 schools in eight highly diversified communities on the west coast. The curriculum focused on providing the 7th and 8th grade students the skills needed to resist drug and alcohol use. Throughout the program, approximately 4000 7th grade students were assessed six times (once every year) after the program was completed until grade 12. The results of this particular program were that as soon as the program was completed, the effects on drug use ended. Ellickson et al. (1993) found that the cognitive risk factors continued until the 10th grade for most of the students, but over all found that it is doubtful that early prevention is effective without some form of continued prevention efforts during high school.

With these studies we see an assortment of results in terms of the effectiveness of many different youth drug prevention programs; some are very effective, some are moderately effective, and some may not be effective at all. What is for certain, however, is that in order for these culturally sensitive programs to continue to be in existence, they must continuously be evaluated, updated, and enriched (Corvo & Persse, 1998). Education about substance abuse, solid backgrounds in substance abuse prevention along with community decision maker support have been identified as the cornerstones for a successful program (Callahan, Benton, & Bradley, 1995; Spooner & Hall, 2002). The Juvenile and Adolescent Substance Abuse Prevention program (JASAP) based on the knowledge base of substance abuse prevention and strong community decision maker support, was and educational intervention introduced in Fulton County, GA. JASAP is a curriculum-based prevention and health promotion program for Fulton County youth between the ages of 13 to 18 years of age. Participants are identified through juvenile court, schools, churches, community, and other youth organizations to break the cycle of addiction which leads to crime and incarceration. The program was established to promote healthy decision-making skills that would eventually lead to informed choices and decisions surrounding drug and alcohol use.

Evaluation Overview

The program evaluation for JASAP consisted of an evaluation of the implementation fidelity, process and outcomes. The evaluation plan was guided by theory and empirical research. Specifically, this evaluation plan was driven by the Trans-theoretical Model of Change and by the Theory of Reasoned Action and Planned Behavior. The Transtheoretical Model (Prochaska & DiClemente, 1983; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Velicer, 1997) is a model of behavior change which integrates other theories and has been the basis for developing effective interventions to promote changes in health behaviors. The central organizing construct of the model is the Stages of Change which encompasses the model of intentional change. Intentional change involves decision making by the individual and also involves emotions, cognitions, and behavior. The present research project assesses the participants' readiness to change, thus enabling the researcher to track the participant's progress.

The Theory of Reasoned Action asserts that an individual's intention to perform a behavior under his or her direct control is a combination of attitude toward performing the behavior and subjective norms. For behaviors which were outside one's direct control, the researchers proposed Theory of Planned Behavior which added the element of

perceived control to predict behavioral intentions. Perceived control was considered to be a combination of perceived power and beliefs of control. Thus, this evaluation includes an evaluation of behavior intentions as dependent variables.

The evaluation plan is also guided by empirical findings related to youth intervention programs, focused on African American youth. Kemper, Spitler, Williams, Rainey (1999) analyzed youth service programs for at-risk youth. Their results revealed that successful programs have common elements such as interactive collaboration which would minimize duplication of services and maximize the impact of interventions for high-risk youth. To effectively address the unique needs of at-risk African American youth, these relationships should extend into the community to include participation by all concerned individuals. This evaluation will therefore assess social support of the participant as well as the number of referrals and outreach activities related to the participants. The survey questions adapted by Robinson et al.'s (2001) study on the effect of substance abuse education on knowledge, attitudes, and behaviors were utilized. Specifically, survey questions assessed knowledge, attitudes, short-term behaviors, long-term behaviors, and peer use behaviors. Also, Simpler and Langhinrichsen-Rohling (2005) found that individuals who had symptoms consistent with two or more psychological disorders were more likely to report higher levels of involvement with substance use than individuals who reported symptoms consistent with one or no psychological disorders. This evaluation plan thus assessed the number of referrals for mental health treatment.

The programs' impact was assessed by considering the Cognitive and behavioral impact—how has program participation changed prior knowledge, specifically the processes and outcomes related to making decisions about drug and alcohol use and how this is reflected in behavioral measures. As an evaluation of the cognitive impact, it was predicted that the participants would:

(1) Show an increase in their knowledge on the post test versus the pre test to questions related to decisions about drug and alcohol use.
(2) Demonstrate that they can accurately list the pros and cons of engaging in substance abuse.
(3) Have more cons versus pros related to drug and alcohol use after exposure to the program.
(4) Indicate the appropriate behavioral intentions and positive attitudes toward engaging in educational/career pursuit after exposure to the program.
(5) Have identified mentors/individuals who they could turn to when challenged with a decision related to drug and alcohol use.
(6) Indicate a moderate to high score on the Social Support Scale.
(7) Rate confidence (self efficacy) in making healthy substance abuse related decisions.
(8) Demonstrate progress along the Stages of Change and Readiness to change scale to indicate resources enabling them to pursue, maintain, and apply the healthy decision-making skills learned in the program to their life.
(9) Rate teacher and program evaluations positively (above neutral ratings).

Behavioral impact

(10) Evidence of continuing school/work pursuits
(11) Absence/termination of substance use/abuse involvement

Design and Participants

Design.

A pre-test post-test between-groups design was used by comparing the pre test measures obtained from the participants entering the program. Although the pre and post test items on the survey was the same, the post test evaluated some additional outcome measures deemed necessary to conduct implementation fidelity and products of the program.

Variables.

The independent variable was the JASAP program and the dependent variables were the effect of the education program on the teenagers exposed to the program. Specifically, the independent variables were the processes constituting the JASAP program such as:

(1) Tools/activities associated with JASAP, such as enrollment of the participants, initiation of education curriculum, referrals and tracking of participants, (2) Entities involved in the implementation of JASAP in Fulton County including schools and youth service programs. The dependent variables constituted the outcomes and products of JASAP education component.

Participants. A total of 246 participants were surveyed and information was entered into the database. The reported attendance by the participants varied from 3 to 8 sessions. Demographics from the database indicated an

almost even distribution of males (57%) and females (43%). The grade/age distribution however varied from the 3rd grade to the 11th grade. The average age was 13, the average student GPA was 2.96.

Materials

The curriculum of the educational intervention consisted of the following:
Drug and alcohol prevention
Promoting healthy lifestyles and introducing options to using drugs and smoking
Alcohol Prevention Curriculum
Review of the impact of smoking on the body
Short term and long term effects of smoking
Review of the effects of peer pressure associated with drinking
Identify advertising techniques for media which promote drinking, smoking and advocate unhealthy lifestyles.
Decision Making
Improving and developing healthy decision making and communication skills
Identifying positive and negative influences
Developing Relationships
Identifying problems
Developing resolution for problems
Making informed choices
Career planning
Identifying long term and short term goals
Career Development (13-17) (15 min)
Introduction to career development
Introduction to career choices and options
Advocacy in the community
Advocating Drug free and Healthy behaviors and lifestyles
Identifying and explaining why it is important to become involved in your community.
Examples of how students can become more involved in their schools and communities
Additionally, the curriculum was adapted according to age group as follows:
Ages 10-12 Life Skills training
Communication Skills
A letter informed parents of what topic was taught to encourage them to follow up with re-enforcing the lesson at home.
Ages 13-17 Begin with the 'Drug Free Living for Teens' - Powerpoint presentation. This presentation emphasized:
Values
Facts about drugs
Kind of offers
What to say or do in different situations
Positive vs. negative influences
Figuring out if a friend has a drug problem
Evaluation tools were developed to assess the dependent variables. The tools consisted of survey questions and archival records. Survey questions gauged the cognitive impact and the archival records gauged the behavioral impact of JASAP. Specifically, the following scales were utilized in addition to other survey questions:
Stages of Change and Readiness Ruler (Prochaska & Diclemente, 1982) – This assessed the cognitive progress of the teen after being exposed to the program. Decisional Balance Worksheet for Pros and Cons Assessment (Prochaska & Diclemente, 1984).This assessed if the teenager has learned correct information about the pros and cons of substance abuse.
Self-efficacy scale (Bandura, 1977). This assessed the teen's confidence in her/his knowledge about the information provided by the program. This assessed the teen's confidence in her/his knowledge about the information provided by the program and decisions related to substance abuse, career, and education.
Knowledge, attitudes, short-term behaviors, long-term behaviors, and peer use behaviors survey. This was adapted from Robinson et al.'s (2001) assessment of substance abuse education. The survey questions were adapted to the information provided by the JASAP tools. Such an adaptation ensured high content validity.
Each site was evaluated by an adaptation of the following tool:
Youth Program Quality Assessment (High/Scope Educational Research Foundation, 2005). This assessment is designed to evaluate the quality of youth programs and identify staff training needs.
An instructor evaluation form was also used. This assessed the teaching effectiveness of the instructor and the learning process of the student. Students evaluated their teachers on the following three elements: Instructor Appraisal—"The instructor's knowledge of the subject and discipline is excellent " Course Appraisal—"Overall, I would rate this program as "excellent " Self- Appraisal—"I know significantly more about this subject than I did before I took this course "

Procedures

Health Outreach workers (HOWs) in social work, public health, or a related field were trained by the supervisor to deliver a Curriculum Based Education Program Utilizing Best Practices. This curriculum delivered information about substance abuse which

was accurate and developmentally appropriate. Participants were taught to identify and resist social pressure, and the information was presented interactively, including role playing, discussion and small group activities. The Life skills training activities were also utilized during the educational sessions. The Health Outreach workers also conducted home visits using a structured form.

Participants were recruited from Fulton county partners, and a contact person at each site was established. Parental permission was obtained and assessment sheets were administered to the participants as a prerequisite for entering the program. Assessment sheets noted participant demographics and psychosocial baselines related to substance abuse. A pretest was then administered to establish the knowledge and attitudes baselines for substance abuse. The HOWs met the participants for 8, one hour sessions. Toward the end of the sessions, DiClemente's pros/cons sheet and readiness ruler was administered. A post test was finally administered prior to graduation. The post test consisted of similar items as the pretest and additional tests including, an equivalent forms 'knowledge of substance abuse' test, a set of scenarios where participants were asked to make healthy decisions about substance abuse, and ratings of confidence in future productive activities such as career and education. HOWs also conducted home visits to some participants and referred participants for further treatment if necessary. The evaluation team compiled the tests for the participants and evaluated the participant responses, sites, instructors, and delivery of the curriculum.

Results and Discussion

Data related to the Readiness Ruler, Decisional Balance Worksheet was analyzed towards the conclusion of the educational sessions. The confidence of the participant in her/his knowledge about the information provided by the program and decisions related to substance abuse, career, and education were evaluated on the post test. Knowledge and attitudes were also evaluated on the post test. Instructor teaching was evaluated by the evaluators and the students. Additionally, a site evaluation was also conducted.

Results pertaining to the cognitive outcomes revealed that when participants were asked where they were in their readiness to change their problematic behaviors on a scale of 0 (not at all ready to change) to 10 (already changed), the mean readiness to change was 6.9. Problematic behaviors identified by most of the children included attitude, anger, behaviors. Drug/substance abuse references were made relative to cons for not changing their behaviors (junky, drug addict, jail) by many elementary children. Substance abuse behaviors which participants wanted to change were apparent only from the participants at the Juvenile Justice Center.

Students were evaluated on their perceptions of pros and cons related to a problematic behavior. Overall, students identified the same number of pros and cons (2.0)for changing behaviors, with the cons for not changing the behaviors (1.8) being more than the cons for changing behaviors (.8).

Participants' decision-making skills regarding alcohol/drug abuse were also evaluated. Results indicated that the majority of the participants (94%) made significantly more healthy decisions (Decision scenario 1, χ^2 (1, n = 92)=85.172). When asked the reasons for their decision, participant responses varied from: 'it is illegal' to "I will never do drugs".

Furthermore, participants were asked to indicate if they have considered career options and higher education. These considerations are incompatible with substance abuse and hence were considered important queries. Participants rated their confidence in their choices on a scale of Strongly Disagree to Strongly agree. Furthermore, participants were asked to indicate if they have considered career options and higher education. Participants reported a higher confidence in future decisions: Jobs, χ^2 (2, n = 102)=23.011, $p < .001$; Education, χ^2 (2, n = 102)=20.176, $p < .001$.

Pre post tests assessed knowledge gain and attitude change (n = 246). Knowledge was tested using the same test as the pretest and another equivalent test. The equivalent test was administered as a post test. Results indicated that the knowledge on the similar pretest increased significantly after the educational program, $t(205)= -3.03$, $p =.001$ (Mean = 11.32, SD = 3.2) to the post test (Mean = 12.68, SD = 2.6),. Scores on the equivalent test of knowledge about alcohol and substance abuse revealed that participants scored an average of 9 points out of a total of 12. Also, although non significant, the attitude about alcohol and drugs improved from the pretest (Mean = 3.63, SD = 1.6) to the post test (Mean = 3.84, SD = 1.4).

The YPQA analyses of 15 sites was conducted. All sites were evaluated on dimensions such as Safety = Physical environment accommodates program offerings; Supportive environment = Provides opportunities to be actively engaged; Interaction opportunities = Provides opportunities to participate in small groups; Youth centered = Supports a positive youth development focus; Publicity = Schedules of program sessions are reliable and well publicized; Access = Program locations, schedules, and costs facilitate youth access. All the 15 sites did not meet one major element of 'Publicity'.

Instructors were evaluated by the evaluator on their teaching effectiveness and also by the students in the program. Students rated their instructor on three items related to the instructor appraisal, course appraisal and student self-appraisal of knowledge gained. The ratings were on a 5 point scale varying from 5 = strongly agree; to 0= not at all agree. In general, students strongly agreed with the following statements, and all the instructors had very similar ratings across sites.

Telephone contact was made with participants in the past. Respondents were asked three questions—Whether they were still in school and/or working; whether they were using/abusing alcohol or drugs; and improvements that could be made to the JASAP program. To date, contact was made with 88 participants. Results from direct conversations, and with conversations with significant others revealed that 1 out of 88 past participants, reported abusing drugs. Majority of the participants were still in school or working on their GED. Two of them reported they were looking for work. The only one who reported drug use was out of work. Improvements for the JASAP program were suggested by very few participants, with one complaint being that it was boring at times. The rest of the participants and significant others reported that they were happy with the program and that they liked it. Several of the respondents recalled the instructor names.

The results therefore revealed a significant impact of JASAP on cognitive and behavioral outcomes. Results show an increase in knowledge on the post test versus the pre test to questions related to decisions about drug and alcohol use, demonstrate that they can accurately list the pros and cons of engaging in substance abuse, had more cons versus pros related to drug and alcohol use.

Results also indicated that the participants demonstrated appropriate behavioral intentions and positive attitudes toward engaging in educational/career pursuit. Participants identified a moderate level of Social Support by reporting the presence of mentors/individuals who they could turn to when challenged with a decision related to drug and alcohol use, with the HOWs being one such source. Participants made healthy substance abuse related decisions; demonstrated progress along the Stages of Change and Readiness to change scale to indicate resources enabling them to pursue, maintain, and apply the healthy decision-making skills learned in the program to their life. Furthermore, teacher and program evaluations were positive. Self report by participants and significant others also revealed a behavioral impact of the program on continuing school/work pursuits, and reporting an absence/termination of substance use/abuse involvement.

These results are in agreement with the positive findings of Belgrave et al. (2004), Rollin et al.'s (1999) studies. The follow-up of participants a year later indicates that the positive effects were sustained for at least a short period of time. It is surmised that these positive results of the early substance abuse intervention program-JASAP may be due to the curriculum and also due to the social support provided by the HOWs, in a high-risk environment (SAMHSA, 2005) where substance abuse and meager resources are prevalent. This 'halo effect' created by the presence and investment of the HOWs in the children, may have made the children more receptive to information from the HOWs.

Although the early intervention showed promising results, it is acknowledged that the impact is albeit short-term, and long-term support may be essential in sustaining the positive impact of the JASAP program. In summary, the results of this study provide converging evidence for the need for such early interventions to prevent substance abuse, to empower the community and provide support systems for those who need it most!

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