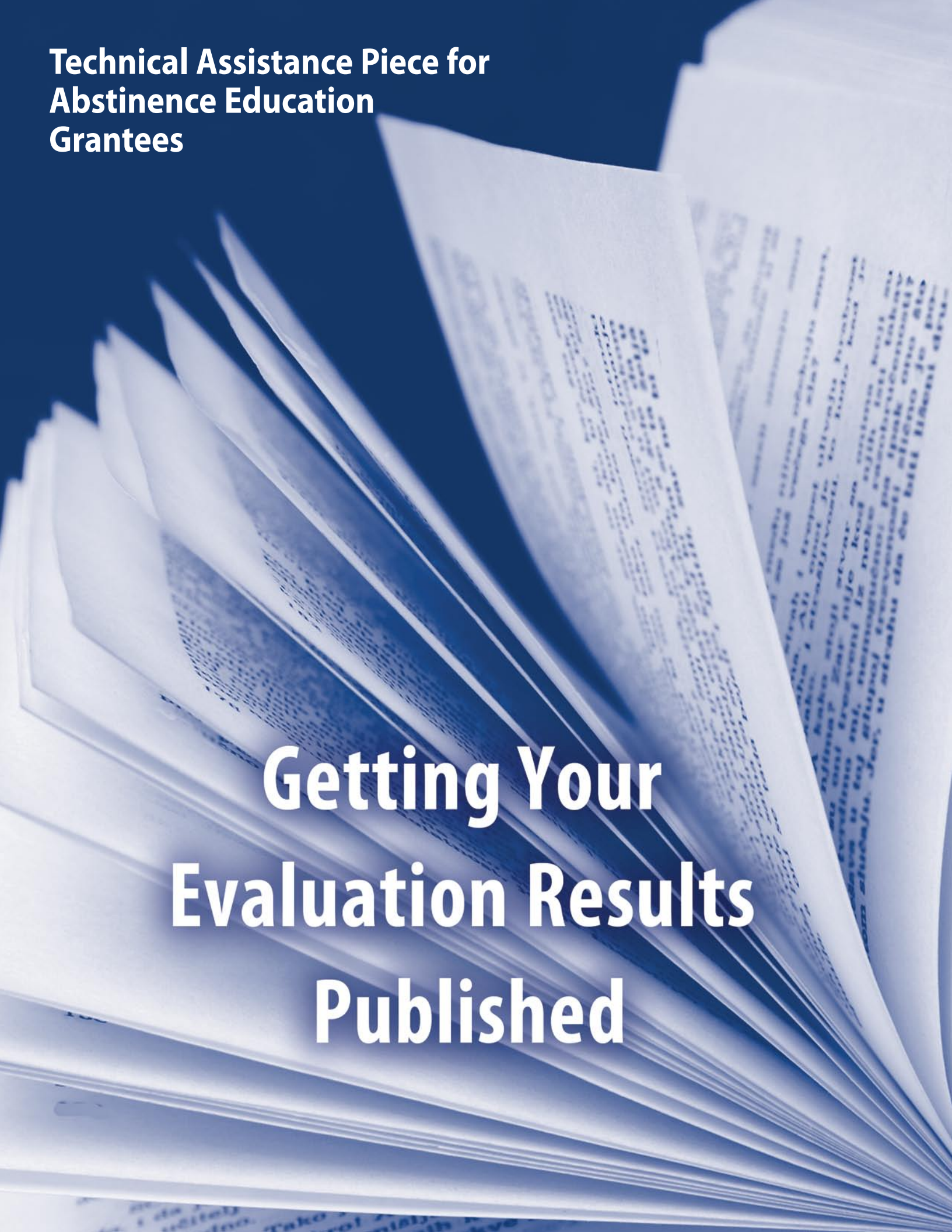
Technical Assistance Piece for Abstinence Education Grantees



Getting Your Evaluation Results Published

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Technical Assistance Piece for Abstinence Education Grantees

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INTRODUCTION

State and Federal governments spend a tremendous amount of money each year on public health programs geared toward adolescents. Many of these programs seek to initiate positive behavioral change. The funding allows schools, faith-based groups, and other organizations to provide a multitude of programs for youth in communities throughout the United States. These programs have good intentions; however, the effects are not immediately clear. Program directors and staff are confident that the programs are making a positive impact on the young people they serve, but responsible science and sound public policy dictate that these programs be carefully evaluated and the results published.

Publishing evaluation results in a peer-reviewed journal is an extension of the evaluation process. Journal publications provide evidence concerning program effects to the scientific community and to the public, and can serve to inform public policy. Published articles are clearly important. Nevertheless, relatively few funded projects produce published evaluation articles. Reasons for this lack of publication include the following: Project directors are not aware of how to publish their results, programs do not demonstrate effectiveness/significance, grantees do not view publications as important, and project directors are not encouraged to publish.

This technical assistance (TA) piece provides guidance to help you prepare manuscripts for publication. Consider it a guide to scientific writing.

Journal editors and reviewers don't visit programs to see how they work and then decide whether they want to publish results. They read the manuscripts and make publication decisions based on what they have read. This document will take you through the writing process, showing you how to produce a manuscript that will become a published journal article.

WHY EVALUATION? WHY PUBLICATION?

In simple terms, evaluation provides feedback about our efforts. Are we accomplishing what we hoped/planned to accomplish? Are we getting the results we expect? Although we know that abstinence works, are our abstinence education efforts effective in helping program participants choose abstinence? What is working? What's not working? Are we having more of an impact with some groups than others? What can we do to improve our impact?

Publishing program evaluations in peer-reviewed, scholarly/professional journals is critical. In some ways, it is a validation of what we are doing. It is clearly a logical extension of the evaluation process. Anyone can say "our program works." But can you show quantitatively how the program is working? People may truly believe that their program is producing positive change. They may even have some evidence to back up their claims. But publishing results in well-respected, peer-reviewed journals is the key to establishing credibility in the scientific community and, increasingly, the public policy arena.

The lack of scientific evaluations of the effects of abstinence education programs published in peer-reviewed journals is a legitimate criticism of abstinence education. Increasing the number of publications that show positive results demonstrates that abstinence education works and helps secure and maintain public support for abstinence education programs.

How Does the Publication Process Work?

A number of journals have an interest in adolescent health and could have an interest in publishing the results of your abstinence education program evaluation. While there are upper-tier scholarly publications, other publication forums such as trade journals—whose audience may include parents, teachers, and specialists—may have a targeted interest in your research. There are a variety of other opportunities and popular venues for publication, including state journals and the Web. A few examples of such journals are *American Journal of Health Behavior, American Journal of Health Education, Journal of Sexuality Education,* and *American Journal of School Health.* Find a few journals that are the best fit for your topic.

Journal reviewers make recommendations concerning publication supported by a clear analysis of the manuscript, and provide constructive suggestions to authors. Sometimes reviewers accept an article with minor revisions, other times authors are given the opportunity to make major revisions and resubmit the article for further consideration, and other times a manuscript is rejected outright. Try not to take criticisms personally. Often, even if the manuscript is rejected by one journal, authors can use reviewers' comments to revise it, and eventually have it accepted by another journal.

Application: *When preparing a manuscript, (1) review published articles that report the results of abstinence education evaluations, (2) follow the author guidelines for the journal to which you plan to submit, and (3) have experienced authors review and comment on your manuscript. Once you submit your manuscript, if it is not immediately accepted, do not be discouraged. Use reviewer comments to revise and strengthen your manuscript.*

PLANNING FOR EVALUATION (AND PUBLICATION) FROM THE BEGINNING

A researcher planning a project on a given topic should first know and understand what previous researchers in this area have done. The idea is for the researcher to "know what is known"; that is, to know the strengths and weaknesses of previous studies and identify gaps in knowledge. The researcher who knows the research in his/her area can take advantage of the strengths of previous studies, take steps to overcome the weaknesses or avoid the pitfalls of previous studies, and conduct a study that addresses some of the gaps in knowledge and makes a contribution to the professional literature.

Developing Logic Models

A logic model shows the relationship between the behaviors desired (in this case, abstinence from sexual activity), determinants of the behavior, and the intervention. Many variables are related to maintaining a commitment to abstinence, but no single variable seems to be an overriding determinant. Important factors that might be influenced by a curriculum intervention include the intention to remain abstinent, the perception that abstinence is the social norm, and self-efficacy to remain abstinent (or confidence in one's ability to say no to sexual activity). A logic model helps select or develop an intervention that will impact those factors that will help program participants maintain a sexually abstinent lifestyle. If the intervention changes these factors, it should also change behavior.

Application: *(1) Use research to identify factors thought to influence sexual behavior that you believe can be modified through your intervention, and (2) select or develop an intervention to address these factors.*

Choosing/Developing Interventions to Impact Outcome Variables

An intervention is the treatment to which program participants are exposed—in this case, your abstinence program. For our purposes, we are talking about an abstinence education curriculum. You can choose an existing abstinence education curriculum, or develop your own. It is certainly easier to select an existing curriculum than to develop one. If you do choose an existing curriculum, it may make sense to select one that already has some published evidence of effectiveness.

Once you have identified your potential outcome variables—the things you want the intervention to impact or change—carefully examine the curriculum you plan to use to see if there is good reason to believe that the curriculum will impact these variables. The curriculum may not address the factors you want to impact or you may believe that even a curriculum that has shown positive results may not meet the needs of your target population. If that is your situation, then you may want to develop your own curriculum.

Many would-be developers believe that producing an effective curriculum merely entails providing information. Information will increase knowledge, and increased knowledge will lead to positive behaviors. Increasing knowledge about the risks and benefits of certain health behaviors is important. However, almost everyone knows that smoking causes lung cancer, heart disease, and a number of other health problems, yet a substantial number of people continue to smoke. Health behavior researchers might explain this situation by saying that

knowledge by itself is a necessary, but insufficient, precursor to behavior change. In plain English, this means that (1) before you can expect people to make a healthy behavior change, they need to have some level of knowledge/understanding about the choice you are encouraging them to make and why it is a healthy decision, and (2) knowledge is not enough.

If providing information is not enough, then what is an abstinence education curriculum developer to do? Health behavior researchers would probably point out that several models/theories have been developed to explain health behavior. For example, the Health Belief Model is based on the concepts of perceived (1) severity, (2) susceptibility, (3) benefits/ costs, and (4) self-efficacy. Applied to abstinence education, this means that those who believe that (1) the potential negative consequences of sexual activity can be severe; (2) if they participate in sexual activity, they are susceptible to these negative consequences; (3) the benefits of abstaining from sexual involvement clearly outweigh the perceived benefits of having sex; and (4) they can effectively resist pressure/ temptation to have sex, they will be far more likely to abstain from sexual activity than those who do not.

Effective programs use teaching methods and activities that actively involve program participants and help them personalize the message. Carefully review curricula that have been found to have positive results and you will see that there is far more involved than teachers simply providing information.

Application: *(1) In choosing a curriculum, consider using an existing curriculum that has positive published evaluation findings and appears to address your outcome variables, and (2) if you decide to develop your own curriculum, base the curriculum on sound health behavior theory and characteristics of effective programs.*

Survey Instrument

To evaluate the impact of your abstinence program, you need some way to collect information (data) about program effectiveness. One way is to survey students using a self-report questionnaire including items that allow you to measure your outcome variables. There should also be items that provide background characteristics of program participants (age, gender, race, etc). Don't be too concerned about developing these items for yourself. For everything you want to measure, there are probably a number of items or scales that have been used in other studies. Feel free to use these, but do give credit to your sources.

When it comes to testing instruments, researchers (as well as journal editors and manuscript reviewers) are concerned with the validity and reliability of the measures that are used. In this case, the term validity is used to indicate whether the item or scale measures what it purports to measure. Does the scale you have selected or developed to measure self-efficacy, or intent to remain abstinent, really measure these constructs? When you select items or scales that have been repeatedly used in other published studies, you can make the case that these items/scales have been accepted as valid measures of the construct you are attempting to examine. Reliability refers to the degree to which a measure produces consistent results.

IMPORTANT: **Validity** goes with the testing instrument. Either it is an acceptable measure of a construct, or it is not. **Reliability,** however, is more a function of the group with which you are working and the manner in which the data are collected. Improve the reliability of your data by standardizing data collection procedures. Have a written protocol that specifies everything the person collecting the data does and everything he/she says.

Application: *(1) When possible, use measures that have previously been shown to be valid and have demonstrated reliability in previous studies, and (2) improve reliability of data collected in your study by standardizing data collection procedures.*

Participants

When developing a manuscript that describes your evaluation results, provide information about the participants, such as method of recruitment. For example, explain that participants are ninth grade students from six schools in the district that volunteered to participate in the study. Three schools were assigned to the intervention group. The other three were assigned to a waiting comparison condition. These latter three schools will have the opportunity to offer the program to next year's ninth grade students. Students who are in the ninth grade this year will remain as comparison students.

Define the characteristics of the participants. In addition to age or grade level, reviewers generally want information about gender and race/ethnicity. It might be helpful to indicate the number/percentage of students who reported they had previously participated in sexual intercourse and those who reported they had not participated. It is also helpful if you can demonstrate that the intervention group does not significantly differ from the comparison group on these key characteristics.

Application: *Collect data concerning characteristics of program participants and include this information in your manuscript.*

Data Collection Procedures/IRB Responsibilities

When data are collected from human subjects for research evaluation purposes, approval from an Institutional Review Board (IRB) is needed. Universities engaged in research, as well as many hospitals and other organizations, have an IRB. The idea is to have an independent party reviewing all procedures to safeguard potential participants. IRB review typically involves examining whether the study poses a possible risk to participants, ensuring participation is voluntary and that informed consent is obtained from participants (in the case of minors, this means consent from the parent as well as the child), and that procedures are in place for protecting the confidentiality of the participants. IRB approval must be obtained before data may be collected.

If you plan to collect data via a student survey, plan for a pretest of all students (both intervention and comparison). After the pretest students in the intervention group receive the program. Students in the comparison group do not. After the program has been taught to students in the intervention group, all students (intervention and comparison) are tested again. It is also good if you can include a follow-up survey. When an evaluation does not include a follow-up survey, or the follow-up period is short, the chances of showing changes in behavior are reduced. The researcher needs to allow a long enough follow-up period so that a number of participants in the comparison group will begin participation in the behavior (in this case, sex). If the intervention works, a (significantly) smaller number of students in the intervention group will have begun participation in the behavior.

Some research studies consist of a one-time survey. The researchers may want to examine the relationship between sexual attitudes and behavior at a single point in time. Since the researchers do not need to contact the participants a second time, the data collected are totally anonymous. The researcher does not need to know who completed which questionnaire, or even who participated in the study. The evaluation of the effects of an abstinence education program (or any intervention), is a different situation. The researcher must be able to match what a specific participant reports at pretest with

what the same participant reports at posttest, and at follow-up. The question is how to best do that, while maintaining confidentiality of participants. A variety of procedures can be used; however, one that has been proven to be effective is to simply have participants write out their birthdates (05/25/95), initials ("J" and "D" for Jose Diaz), and a corresponding section number reflecting their agency, school, etc. When data are entered, only the participant identification number (not the participant name) becomes a part of the data file. Thus, when data are analyzed, the researcher can identify data from three test times (pretest, posttest, and follow-up) from the same individual (same identification number), but doesn't see the identity of the participant.

Application: *(1) Secure IRB approval prior to collecting data and follow the protocol approved by the IRB; (2) develop a data collection plan that includes a pretest, posttest, and follow-up of both intervention and comparison groups; and (3) develop a plan to match individual participant responses over time.*

Data Analysis

Data are entered into a computer file and analyzed using a statistical analysis package. SAS and SPSS are two popular packages. A variety of statistical tests may be appropriate for your situation. If you do not have a solid background in statistics and data analysis, you need to get help from someone who does. A competent, effective evaluator can determine which statistical tests should be conducted, conduct the data analysis, and provide a clear report of the results.

Application: *If you do not have the skills to select the appropriate statistical tests necessary to analyze the data and conduct the data analysis, make sure you have access to someone who does.*

WHAT ARE THE RESULTS OF EXISTING EVALUATIONS?

Know What Is Known

You may not consider yourself a researcher. You simply want to publish an evaluation of your abstinence education program. Then, for all intents and purposes, you are a researcher. Use published research to help design an evaluation study that will make a contribution to the literature; that is, tells us something we don't already know. For example, you might want to use a curriculum for which there are already positive evaluations, but you want to test its effects with a different population.

Application: *(1) Review published evaluations, and (2) think about how the evaluation you are planning can make a contribution to the literature.*

What Needs to Be Done

The methods section of an article tells the reader a number of things about how the study was conducted. The information presented should enable the reader to replicate the study. The researcher presents the study design, identifies the participants and the testing instrument, describes the various measures, and explains how data were collected and analyzed.

A study should be designed in such a way that the results obtained can clearly be attributed to the intervention. If you used a specific abstinence education curriculum with your program participants and collected data from these participants, the data should tell you whether or not your program was effective. However, many things other than the intervention can potentially influence the results of a study. These are "threats to internal validity." Let's look at an example.

Jill was scheduled to teach an abstinence education curriculum at a high school in her community. The school district wanted to evaluate the effects of the curriculum. Jill believed in the program, knew in her heart that it worked, and was delighted to have the opportunity to demonstrate its effectiveness. The district was interested in whether the program increased student knowledge about sexual health issues, produced a more positive attitude toward abstinence, and reduced the number of students engaging in sexual activity. Jill and district officials developed a questionnaire to address these issues. They surveyed students at the beginning of the school year, and then Jill taught the program to ninth grade students. After the students were surveyed again at the end of the school year, Jill met with the person responsible for analyzing the data, who told her that the student knowledge scores were higher at posttest than at pretest. Jill was excited. She said "That's the curriculum. I knew that it would work." Then the analyst told her that the attitude toward abstinence expressed by students at posttest was far more positive than at pretest. Jill had difficulty containing herself. This was proof positive the curriculum worked. Then came the results for behavior. The data analyst told her that far more students reported having sex at posttest than reported doing so at pretest. Jill was devastated. "There must be something wrong. The curriculum couldn't have caused students to have sex." The data analyst said, "You took credit for the positive change in knowledge. You took credit for the positive change in attitudes. Looks like you need to take credit for the behavior change as well."

What had happened? This result is predictable. As students get older, they are simply more likely to do the things we educators would prefer they not do—like

smoke, drink, use drugs, and have sex. If Jill and school officials had included a comparison group in the study—a group of students who did not participate in the abstinence education program—results might have been different. Students in the comparison group might have reported having sex at a far greater rate than students in the intervention group.

A lack of results doesn't mean a program is ineffective, but establishing an appropriate comparison group is an important step in making sure the results of your study will stand up to outside scrutiny.

Application: *Establish a comparison group comparable to the group receiving the program.*

Making a Contribution: Intervention/Implementation

When preparing a manuscript, describe the intervention and how it was implemented. Provide the name of the curriculum and describe it. Remember, you are helping the reader develop some understanding of the program, not writing a commercial. For example, you might say, "The program included 15 lessons, based on the Health Belief Model, designed to be implemented on consecutive school days over a three-week period. The program emphasized a clear abstinence message throughout the 15 lessons. The lessons were grouped in three major divisions: Knowing Myself, Relating to Others, and Planning My Future. Teaching methods included some lecture/large group discussion, but emphasized small student discussion groups, individual reflection, and role play activities. Two short video clips, or trigger films, dealing with sexual decision making situations, developed specifically for use with this curriculum, were also included."

Fidelity is also necessary because it demonstrates consistency with program implementation, instructional strategies, and consistency relative to the frequency and duration of program delivery. Fidelity can be monitored by having educators keep journals, making classroom observations, and pursuing ongoing dialogue with abstinence educators and/or teachers.

Application: *(1) Describe the intervention/curriculum; (2) in conducting the project, take steps to maximize fidelity to the intervention; and (3) in your manuscript, briefly indicate how you ensured fidelity to the intervention.*

RESULTS AND INTERPRETATION

Manuscripts reporting the evaluation of an intervention always include a results section. This is where the researcher indicates both in the text and in table format what was learned from the data analysis. For each statistical test conducted to determine relationships between variables or to determine whether the intervention made a difference, the researcher reports, among other information, the value of the test statistic and the probability associated with the value of the test statistic. Questions that might be considered important to answer include the following: (1) Was there a statistically significant difference due to the intervention? and (2) What was the effect size?

Let's say the researcher tests whether study participants in the intervention group, who were virgins at pretest, were more likely to report remaining virgins at posttest and at follow-up than were virgins in the comparison group. The researcher conducts an appropriate statistical test, obtains a value of the test statistic, and finds that the probability associated with the test statistic is less than .05. This tells the researcher that the differences seen between the intervention group and the comparison group are unlikely to be because of chance (that is, differences this great would be expected to occur by chance less that 5% of the time). Typically the researcher specifies a probability level of .05 or .01 as statistically significant.

If the probability is less than .05 (or .01) this simply tells us that there is a difference, one that is greater than no difference. Many journals now expect researchers to also include some measure of effect size, basically indicating whether the difference can be classified as small, medium, or large.

Application: *(1) Report the results of relevant statistical tests; (2) in addition to indicating the results in the text, include appropriate tables; and (3) don't forget to include a measure of effect size.*

Placing Results in Context

Manuscripts generally include a discussion section. This is not simply a repetition of the results, but is an attempt to put the results in context. What do these results actually mean? How do these results compare to the results obtained by other researchers? If there are differences from earlier studies, why is that? Answer the "so what?" question. As a result of these findings, what should be done differently?

Application: *Answer the "so what?" question.*

Limitations

In a perfect world, or perfect study, everything goes right. In a perfect evaluation of an abstinence education program, everything works together to let us know that the results we obtained reflect the degree to which the intervention can be expected to produce changes, and we are confident these results can be replicated any time, anywhere. In the real world, that simply does not happen. There are always things beyond the control of the researcher that might cast some doubt on the study findings or prohibit one from generalizing the results to other populations. Researchers need to identify these. Some limitations may keep an evaluation from receiving publication consideration. However, editors and reviewers expect researchers to acknowledge the limitations of the study.

Application: *Identify the limitations of your study.*

QUANTITATIVE AND QUALITATIVE APPROACHES

Simply put, a quantitative approach is one that involves numbers. There are scores on various scales. The researcher uses statistics to determine if there are significant differences between or significant relationships among different variables. Qualitative approaches more often involve narratives. One researcher has said, "Quantitative approaches build the foundation. They are the strong bones that make up the skeletal systems. Qualitative approaches add richness to the data. They are like the meat on the bones."

When researchers involve the systematic gathering of stories, participant narratives, and/or observational reflections in their evaluation, they are including a qualitative approach. Ideally, those evaluating abstinence education programs will take a strong quantitative approach, but won't neglect the collection of qualitative data.

Application: *Include both quantitative and qualitative approaches to evaluation.*

Choosing an Evaluator: Expert Evaluators Are Worth Their Weight in Gold

For people who do not have training and experience, the tasks that have been described may sound overwhelming. The more an abstinence education project director or staff member knows about evaluation, the better. Since the publication process is an ongoing relationship between the project director and the project evaluator, it is important to choose someone who is knowledgeable, experienced, and flexible. Consider choosing someone who already has a strong record of journal publications. Also, synergy is a crucial component of any working relationship, and this especially applies to project directors and project evaluators. Perhaps there are two take-home messages for you: (1) Understand the importance of publishing evaluation results, and (2) work with an evaluator who really knows what they are doing—and can work with you.

PRESENTING RESULTS AT PROFESSIONAL CONFERENCES

Another way to get your evaluation results out to the world is to present them at a professional conference. This is usually much easier (acceptance rates are higher) than having the paper published in a professional journal. It also doesn't require as much labor as preparing a manuscript for publication: While a well-developed manuscript takes many hours of work, an experienced researcher may be able to develop an abstract for submission as a conference paper in less than an hour.

Generally, potential presenters respond to a "call for papers" and submit an abstract for presentation consideration. Some conferences want only a 250-300 word abstract. Typical formats for presenting include an oral presentation of results or a poster presentation. Abstracts often must be submitted several months prior to the conference. For example, a November conference may have a March or even February submission deadline. Professional conferences give presenters an opportunity to showcase their program, network with other professionals, and learn. Examples of some conferences that have included papers on the evaluation of abstinence education programs include National Abstinence Education Evaluation Conference, American Public Health Association, American School Health Association, American Association for Health Education, and American Academy of Health Behavior. These national conferences are perceived as top-tier scholarly venues; however, there are a multitude of other conferences at which you might present your materials, including a variety of state conferences. National presentations are an excellent forum; however, state conferences can be perceived as more applicable to your surroundings and relevant parties, such as parents, teachers, and school districts. Often, local and regional conferences provide an excellent platform to present, and the acceptance rate for presentations is even higher than for national conferences.

Application: *Disseminate evaluation results by presenting a paper at a professional conference.*

CONCLUSION

The publishing process is often daunting and challenging, but it is necessary to demonstrate the effectiveness of abstinence education programs. So it's been said, the bud is compared to our thoughts, the blossom is compared to our action, and the fruit is the realization of action steps. For us to experience fruition through publication, we must consider the steps and suggestions presented here to create a well-developed manuscript containing an introduction and rationale, methods, results, discussion, and a conclusion, and so increase our chance for success.

While the emphasis of this piece is on publishing results, this cannot be accomplished without laying the foundation of responsible research. Therefore, research methodologies were infused throughout this piece in order to reinforce that publications are an extension of rigorous research. The importance of each of these respective areas cannot be overstated, and attempting to highlight one over the other is impractical.

The steps shared in this piece are the responsibility of the project director, project evaluator, and the many staff members who make these programs a success. Many of us have heard the word "team" used as an acronym (Together Each Achieves More), emphasizing the importance of working together to create flow and effective programs. Synergism is essential not only to produce publishable results, but to continue the potential effects of abstinence programs on millions of adolescents throughout the United States.

ABOUT THE AUTHOR

Joseph Donnelly, Ph.D., is a professor of health science at Montclair State University in Montclair, New Jersey. His scholarly work, within the field of adolescent health issues, including evaluation results, has been presented at national conferences and published in peer-reviewed scholarly journals. Dr. Donnelly has provided evaluation support for a number of school districts and faith-based groups and, for the past seven years, all statewide abstinence (Title V) projects within the state of New Jersey.

In 2001, Dr. Donnelly was commissioned through the U.S. Department of Health and Human Services/Office of Adolescent Pregnancy Programs to develop a CORE survey instrument for dissemination to all Title XX evaluators and grantees nationwide, and to prepare a packet of relevant abstinence-related scales for use in Title XX programs. This follow-up project was entitled Project S.C.A.L.E.S./Survey CORE: Abstinence Library of Educational Scales and consists of approximately 40 relevant abstinence scales.

Community-Based
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