



Measuring Violence-Related Attitudes, Beliefs, and Behaviors Among Youths:

A Compendium of Assessment Tools



U.S. Department of Health & Human Services

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CENTERS FOR DISEASE CONTROL
AND PREVENTION

Measuring Violence-Related Attitudes, Beliefs, and Behaviors Among Youths:

A Compendium of Assessment Tools



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How To Use This Compendium

This compendium provides researchers and prevention specialists with a set of tools to evaluate programs to prevent youth violence. This compendium is only a first step, however. New measurement tools must be developed, existing tools must be improved, and all such measures must be made available to those of you working in the field of youth violence prevention so that the vast array of prevention programs now being used can be critically reviewed and evaluated. If you are new to the field of youth violence prevention and unfamiliar with available measures, you may find this compendium to be particularly useful. If you are an experienced researcher, this compendium may serve as a resource to identify additional measures to assess the factors associated with violence-related behavior, injuries, and deaths among youths.

Although this compendium contains more than 100 measures, it is not an exhaustive listing of available measures. Some of the more widely used measures to assess aggression in children, for example, are copyrighted and could not be included here. Other measures being used in the field, but not known to the authors, are also not included. You will find that many of the measures included in this compendium focus on individuals' violence-related attitudes, beliefs, and behaviors. These measures will be particularly useful if you are evaluating a school-based program or a community-based program designed to reduce violence among youths. Few scales and assessments address family, economic, or other community factors. It is our goal to include such measures in future editions of this compendium.

Most of the measures in this compendium are intended for use with youths between the ages of 11 and 20 years, to assess factors such as attitudes toward violence, aggressive behavior, conflict

resolution strategies, self-esteem, self-efficacy, and exposure to violence. The compendium also contains a number of scales and assessments developed for use with children between the ages of 5 and 10 years, to measure factors such as aggressive fantasies, beliefs supportive of aggression, attributional biases, prosocial behavior, and aggressive behavior. When parent and teacher versions of assessments are available, they are included as well.

How This Compendium Is Organized

The Introduction, beginning on page 5, provides information about why outcome evaluations are so important and includes some guidance on how to conduct such evaluations. Following the Introduction, you will find four sections, each focusing on a different category of assessments. Each section contains the following components:

- **Description of Measures.** This table summarizes key information about all of the assessments included in the section. Each assessment is given an alphanumeric identifier (e.g., A1, A2, A3) that is used repeatedly throughout the section, to guide you through the array of assessments provided. The table identifies the constructs being measured (appearing in alphabetical order down the left-hand column), provides details about the characteristics of the scale or assessment, identifies target groups that the assessment has been tested with, provides reliability and validity information where known, and identifies the persons responsible for developing the scale or assessment. When reviewing the *Target Group* information, keep in mind that we have included only those target groups we know and that the reliability information

pertains specifically to these groups and may not apply to other groups. When reviewing the *Reliability/Validity* information, you will notice that several measures are highly reliable (e.g., internal consistency $\geq .80$) whereas others are minimally reliable (e.g., internal consistency $< .60$). We included measures with minimal reliability because the reliability information is based, in some cases, on only one target group from one study; these measures may be more appropriate for a different target group. We also included measures with limited reliability with the hope that researchers will try to improve and refine them. Evidence of validity is available for only a few of the measures included in this compendium.

- ***Scales and Assessments.*** The items that make up each assessment are provided, along with response categories and some guidance to assist you with scoring and analysis. In the few instances where scales have been adapted, the most recent (modified) version is presented. We also have provided information on how to obtain permission to use copyrighted materials. In most cases, we have presented individual scales rather than the complete instruments

because instruments generally are composed of several scales. This approach increases the likelihood that the scales' test properties will be altered. Nonetheless, we did this because the field is very new and thus has produced few standardized instruments with established population norms for a range of target audiences.

- ***References.*** This list includes citations for published and unpublished materials pertaining to original developments as well as any recent adaptations, modifications, or validations. In the few instances where scales have been adapted, references for the most recent (modified) version are provided. To obtain information about the original versions, please contact the developers and refer to any relevant references cited.

Choosing the Right Instrument

Developing instruments that are highly reliable, valid, and free of any bias is not always possible. Carefully choose among the measures included in this document. The criteria on the facing page may assist you in making this selection. As with any research effort, consider conducting a pilot test to minimize problems and to refine the instrument.

General Rating Criteria for Evaluating Scales				
Criterion Rating	Exemplary	Extensive	Moderate	Minimal
Inter-item correlation	average of .30 or better	average of .20 to .29	average of .10 to .19	average below .10
Alpha-coefficient	.80 or better	.70 to .79	.60 to .69	< .60
Test-Retest Reliability	Scores correlate more than .50 across a period of at least 1 year.	Scores correlate more than .40 across a period of 3-12 months.	Scores correlate more than .30 across a period of 1-3 months.	Scores correlate more than .20 across less than a 1 month period.
Convergent Validity	Highly significant correlations with more than two related measures.	Significant correlations with more than two related measures.	Significant correlations with two related measures.	Significant correlations with one related measure.
Discriminant Validity	Significantly different from four or more unrelated measures.	Significantly different from two or three unrelated measures.	Significantly different from one unrelated measure.	Different from one correlated measure.

Source: Robinson JP, Shaver PR, Wrightsman LS. Measures of personality and social psychological attitudes. San Diego, CA: Academic Press, Inc., 1991.

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Introduction

Youth violence is a serious public health problem in America. Despite a recent decline in homicide rates across the United States,¹ homicide continues to claim the lives of many young people. The human and economic toll of violence on young people, their families, and society is high. Homicide is the second leading cause of death for persons 15-24 years of age and has been the leading cause of death for African-Americans in this age group for over a decade.² The economic cost to society associated with violence-related illness, disability, and premature death is estimated to be in the billions of dollars each year.³

Researchers and prevention specialists are under intense pressure to identify the factors that place young people at risk for violence, to find out which interventions are working, and to design more effective prevention programs. Across the country, primary prevention efforts involving families, schools, neighborhoods, and communities appear to be essential to stemming the tide of violence, but we must have solid evidence of their effectiveness. To find out what works, we need reliable and valid measures to assess change in violence-related attitudes, beliefs, behaviors, and community factors. Monitoring and documenting proven strategies will go a long way toward reducing youth violence and creating peaceful, healthier communities.

Why Outcome Evaluations Are So Important

Despite the proliferation of programs to prevent youth violence, we have yet to determine the most effective strategies for reducing aggression and violent behavior. We know that promising programs exist, but evaluations to confirm positive effects are lacking.^{4,6} In their desire to be responsive to constituents' concerns about violence, schools and communities often are so involved with prevention

activities that they rarely make outcome evaluations a priority. Such evaluations, however, are necessary if we want to know what works in preventing aggression and violence. In the area of youth violence, it is not enough to simply examine how a program is being implemented or delivered, or to provide testimonials about the success of an intervention or program. Programs must be able to show measurable change in behavioral patterns or change in some of the attitudinal or psychosocial factors associated with aggression and violence. To demonstrate these changes or to show that a program made a difference, researchers and prevention specialists must conduct an outcome evaluation.

Components of Comprehensive Evaluations

Evaluation is a dynamic process. It is useful for developing, modifying, and redesigning programs; monitoring the delivery of program components to participants; and assessing program outcomes. Each of these activities represents a type of evaluation. Together, these activities compose the key components of a comprehensive evaluation.

- **Formative Evaluation** activities are those undertaken during the design and pretesting of programs.⁷ Such activities are useful if you want to develop a program or pilot test all or part of an intervention program prior to implementing it routinely. You can also use formative evaluation to structure or tailor an intervention to a particular target group or use it to help you anticipate possible problems and identify ways to overcome them.
- **Process Evaluation** activities are those undertaken to monitor program implementation and coverage.⁷ Such activities are useful if you

want to assess whether the program is being delivered in a manner consistent with program objectives; for determining *dose* or the extent to which your target population participates in the program; and for determining whether the delivery of the program has been uniform or variable across participants. Process or monitoring data can provide you with important information for improving programs and are also critical for later program diffusion and replication.

- **Outcome Evaluation** activities are those undertaken to assess the impact of a program or intervention on participants.⁷ Such activities are useful if you want to determine if the program achieved its objectives or intended effects—in other words, if the program worked. Outcome evaluations can also help you decide whether a program should be continued, implemented on a wider scale, or replicated in other sites.

Ten Steps for Conducting Outcome Evaluations

Outcome evaluations are not simple to conduct and require a considerable amount of resources and expertise. If you are interested in conducting an outcome evaluation, you will need to incorporate both formative and process evaluation activities and take the following steps:

- Clearly define the problem being addressed by your program.
- Specify the outcomes your program is designed to achieve.
- Specify the research questions you want the evaluation to answer.
- Select an appropriate evaluation design and carefully consider sample selection, size, and equivalency between groups.
- Select reliable and valid measures to assess changes in program outcomes.
- Address issues related to human subjects, such

as informed consent and confidentiality.

- Collect relevant process, outcome, and record data.
- Analyze and interpret the data.
- Disseminate your findings, using an effective format and reaching the right audience.
- Anticipate and prepare for obstacles.

Define the problem. What problem is your program trying to address? Who is the target population? What are the key risk factors to be addressed? Youth violence is a complex problem with many causes. Begin by focusing on a specific target group and defining the key risk factors your program is expected to address within this group. Draw evidence from the research literature showing the potential benefit of addressing the identified risk factors. Given the complexity of the problem of youth violence, no program by itself can reasonably be expected to change the larger problem.

Specify the outcomes. What outcome is your program trying to achieve? For example, are you trying to reduce aggression, improve parenting skills, or increase awareness of violence in the community? Determine which outcomes are desired and ensure that the desired outcomes match your program objectives. A program designed to improve conflict resolution skills among youths is not likely to lead to an increased awareness of violence in the community. Likewise, a program designed to improve parenting skills probably will not change the interactions of peer groups from negative to prosocial. When specifying outcomes, make sure you indicate both the nature and the level of desired change. Is your program expected to increase awareness or skills? Do you expect your program to decrease negative behaviors and increase prosocial behaviors? What level of change can you reasonably expect to achieve? If possible, use evidence from the literature for similar programs and target groups to help you determine reasonable expectations of change.

Specify the questions to be answered. Research questions are useful for guiding the evaluation. When conducting an outcome evaluation of a youth violence prevention program, you may want to determine the answers to three questions: Has the program reduced aggressive or violent behavior among participants? Has the program reduced some of the intermediate outcomes or mediating factors associated with violence? Has the program been equally effective for all participants or has it worked better for some participants than for others? If multiple components of a program are being evaluated, then you also want to ask: Have all components of the program been equally effective in achieving desired outcomes or has one component been more effective than another?

Select an appropriate evaluation design. Choose an evaluation design that addresses your evaluation questions. Your choice in design will determine the inferences you can make about your program's effects on participants and the effectiveness of the evaluation's various components. Evaluation designs range from simple one-group pretest/posttest comparisons to nonequivalent control/comparison group designs to complex multifactorial designs. Learn about the various designs used in evaluation research and know their strengths and weaknesses.

Special consideration should be given to sample selection, size, and equivalency between groups as part of your evaluation plan. Outcome evaluations are, by definition, comparative. Determining the impact of a program requires comparing persons who have participated in a program with equivalent persons who have experienced no program or an alternative program.⁷ The manner in which participants are selected is important for the interpretation and generalizability of the results. Sample size is important for detecting group differences. When estimating the sample size, ensure the sample is

large enough to be able to detect group differences and anticipate a certain level of attrition, which will vary depending on the length of the program and the evaluation. Before the program is implemented, make sure that the treatment and control/comparison groups are similar in terms of demographic characteristics and outcome measures of interest. Establishing equivalency at baseline is important because it helps you to attribute change directly resulting from the program rather than change resulting from an extraneous factor.

Choose reliable and valid measures to assess program outcomes. Selecting appropriate measurement instruments—ones that you know how to administer and that will produce findings that you will be able to analyze and interpret—is an important step in any research effort. When selecting measures and developing instruments, consider the developmental and cultural appropriateness of the measure as well as the reading level, native language, and attention span of respondents. Make sure that the response burden is not too great, because you want respondents to be able to complete the assessment with ease. Questions or items that are difficult to comprehend or offensive to participants will lead to guessing or nonresponses. Subjects with a short attention span or an inability to concentrate will have difficulty completing a lengthy questionnaire.

Also consider the reliability and validity of the instrument. Reliable measures are those that have stability and consistency. The higher the correlation coefficient (i.e., closeness to 1.00), the better the reliability. A measure that is highly reliable may not be valid. An instrument is considered valid if it measures what it is intended to measure. Evidence of validity, according to most measurement specialists, is the most important consideration in judging the adequacy of measurement instruments.

Address issues related to human subjects.

Before data collection begins, take steps to ensure that participants understand the nature of their involvement in the project and any potential risks associated with participation. Obtaining informed consent is necessary to protect participants and researchers. Obtaining permission from participants eliminates the possibility that individuals will unknowingly serve as subjects in an evaluation. You may choose to use *active informed consent*, in which case you would obtain a written statement from each participant indicating their willingness to participate in the project. In some cases, you may decide to use *passive informed consent*, in which case you would ask individuals to return permission forms only if they are not willing to participate in the project. Become familiar with the advantages and disadvantages of both approaches. Once you have secured informed consent, you also must take steps to ensure participants' anonymity and confidentiality during data collection, management, and analysis.

Collect relevant data. Various types of data can be collected to assess your program's effects. The outcome battery may be used to assess attitudinal, psychosocial, or behavioral changes associated with participation in an intervention or program. Administering an outcome battery alone, however, will not allow you to make conclusions about the effectiveness of your program. You also must collect process data (i.e., information about the materials and activities of the intervention or program). For example, if a curriculum is being implemented, you may want to track the number of sessions offered to participants and the number of sessions attended by participants, as well as monitor the extent to which program objectives were covered and the manner in which information was delivered. Process data allow you to determine how well a particular intervention is being implemented as well as interpret outcome findings. Interventions that are poorly delivered or implemented are not likely to have an effect on participants.

In addition to collecting data from participants, you may want to obtain data from parents, teachers, other program officials, or records. Multiple sources of data are useful for determining your program's effects and strengthening assertions that the program worked. The use of multiple sources of data, however, also presents a challenge if conflicting information is obtained. Data from records (i.e., hospital, school, or police reports), for example, are usually collected for purposes other than the evaluation. Thus, they are subject to variable record-keeping procedures that, in turn, may produce inconsistencies in the data. Take advantage of multiple data sources, but keep in mind that these sources have limitations.

Analyze and interpret the data. You can use both descriptive and inferential statistical techniques to analyze evaluation data. Use descriptive analyses to tabulate, average, or summarize results. Such analyses would be useful, for example, if you want to indicate the percentage of students in the treatment and comparison groups who engaged in physical fighting in the previous 30 days or the percentage of students who reported carrying a weapon for self-defense. You also could use descriptive analyses to compute gain scores or change scores in knowledge or attitudes by subtracting the score on the pretest from the score on the posttest. You could extend the descriptive analyses to examine the relationship between variables by utilizing cross-tabulations or correlations. For example, you might want to determine what percentage of students with beliefs supportive of violence also report engaging in physical fights.

Inferential analyses are more difficult to conduct than descriptive analyses, but they yield more information about program effects. For example, you could use an inferential analysis to show whether differences in outcomes between treatment and comparison groups are statistically significant or whether

the differences are likely due to chance. Knowing the change scores of the treatment or comparison groups is not as useful as knowing if the change scores are statistically different. With inferential statistical techniques, evaluators can also take into account (i.e., statistically control for or hold constant) background characteristics or other factors (e.g., attrition, program dose, pretest score) between the treatment and comparison groups when assessing changes in behavior or other program outcomes. Regardless of the statistical technique you use, always keep in mind that statistical significance does not always equate with *practical meaningful significance*. Use caution and common sense when interpreting results.

Many statistical techniques used by researchers to assess program effects (e.g., analysis of variance or covariance, structural equation, or hierarchical linear modeling) require a considerable amount of knowledge in statistics and measurement. You should have a good understanding of statistics and choose techniques that are appropriate for the evaluation design, research questions, and available data sources.

Disseminate your findings. This is one of the most important steps in the evaluation process. You must always keep program officials abreast of the evaluation findings, because such information is vitally important for improving intervention programs or services. Also communicate your findings to research and prevention specialists working in the field. Keep in mind that the traditional avenues for disseminating information, such as journal articles, are known and accessible to researchers but not always to prevention specialists working in community-based organizations or schools.

When preparing reports, be sure to present the results in a manner that is understandable to the target audience. School, community, and policy

officials are not likely to understand complex statistical presentations. Reports should be brief and written with clarity and objectivity. They should summarize the program, evaluation methods, key findings, limitations, conclusions, and recommendations.

Anticipate obstacles. Evaluation studies rarely proceed as planned. Be prepared to encounter a number of obstacles—some related to resources and project staffing and others related to the field investigation itself (e.g., tension between scientific and programmatic interests, enrollment of control groups, subject mobility, analytic complexities, and unforeseeable and disruptive external events).⁸ Multiple collaborating organizations with competing interests may result in struggles over resources, goals, and strategies that are likely to complicate evaluation efforts. Tension also may exist between scientists, who must rigorously document intervention activities, and program staff, who must be flexible in providing services or implementing intervention activities. During the planning phases of the evaluation, scientific and program staffers must have clear communication and consensus about the evaluation goals and objectives, and throughout the evaluation, they must have mechanisms to maintain this open communication.

Future Considerations

The field of violence prevention needs reliable, valid measurement tools in the quest to determine the effectiveness of interventions. In past years, researchers in violence prevention have looked to the literature for established measures and have modified them accordingly to assess violence-related attitudes and behaviors. These adaptations have sometimes yielded satisfactory results, but in other cases, the measures have not yet proven to be very reliable. Researchers have also tried to develop new measures to gauge skill and behavior changes resulting from violence prevention interventions. For example, a number of researchers have developed

measures to assess conflict resolution skills. Many of these measures also require further refinement and validation.

We also need to develop measures that go beyond assessing individuals' attitudes, beliefs, and behaviors. Research findings indicate that a number of complex factors—related not only to individuals but to the broader social environment as well— increase the probability of problem behavior during adolescence and young adulthood. Peers, families, schools, and neighborhoods are all involved in shaping attitudes and behaviors related to youth violence. Measures to assess how these factors are related to violence need to be developed, refined, and made available to researchers and prevention specialists.

To ensure that the instruments we use are culturally appropriate, we must involve a wide range of target groups. Violence cuts across all racial and ethnic groups and is especially prevalent among African-American and Hispanic youths. Some of the more standardized instruments that have been adapted for use in violence prevention efforts, however, were not developed specifically for use with minority populations. Thus, the items contained in some of the more standardized instruments may not be culturally or linguistically appropriate for minority populations.

One final problem we must address is the lack of time-framed measures that can be used for evaluation research. To assess the effectiveness of an intervention, we must be able to assess how a particular construct (e.g., attitudes toward violence or aggressive behavior) changes from one point in time to another point in time following an intervention. Instruments that instruct respondents to indicate “usual behavior,” or to “describe or characterize the behavior of a child or teenager” are not likely to precisely measure behavior change. Instruments that instruct respondents to consider behavior “now or in the last six months” are also not precise enough to measure behavior change.

The field of violence prevention is still very new, and we must make progress on several fronts. New tools must be developed and existing tools need to be improved. More importantly, researchers and specialists dedicated to the prevention of youth violence must have access to the many measurement tools that have been developed. We hope that increased use of and experience with these measures will help to validate them and will expand our knowledge about effective strategies to prevent youth violence.

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