

# **National Study of Delinquency Prevention in Schools**

## **Chapter 5 Predictors of Quality of Program Implementation**

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# **Predictors of Quality of Program Implementation**

This chapter examines correlates of the quality of prevention activity implementation. The indicators of quality described in the previous chapter are the criterion measures. The chapter begins with a summary of hypotheses about predictors of sound program implementation. The remainder of the chapter summarizes tests of these hypotheses as well as additional explorations that were not driven by specific hypotheses. We examine, for example, whether “packaged” or “multi-component” programs are implemented with greater or lesser strength than “home-grown” or unitary activities, and we will examine the role of school-based planning in the implementation process. In the present chapter we examine data about quality at the level of individual programs or activities. Then, in the following chapter, we examine data about the quality of prevention activities at the school level and examine information about the relations between school characteristics and program quality. In performing these tests and explorations, each of the data sources (Principal, Teacher, Student, Program Coordinator Questionnaires, and archival data) are used to identify characteristics of programs, populations, providers, and organizations related to the quality of program implementation.

## **Factors Hypothesized to Leading to Successful Program Implementation**

The following categories of factors are hypothesized on the basis of prior research and experience to be linked to the successful implementation of prevention programs.

1. Organizational capacity (morale, staff stability, history of failed or successful programs in the past).

Better morale, more stable staff, and a history of successful program implementation in the past is expected to go with better current implementation. In contrast, low morale, high staff or principal turnover, and a history of failed programs is expected to go with poor implementation.

2. Leadership and staff traits and past accomplishments.

Implementation is expected to be better in schools in which principals report that they display behaviors associated with effective leadership and where they are perceived by others as effective leaders. Schools where principals or program implementers have a record of accomplishment in the past are expected to be more successful in what they currently implement. And programs implemented by more conscientious implementers in schools led by more conscientious principals are expected to be better implemented.

3. Budget and resources.

Lack of adequate budget or resources is expected to thwart successful program implementation, and adequate budget and resources is expected to promote quality implementation.

4. Organizational support (training, supervision, principal support). Extensive and high quality training is expected to promote high quality and extensive implementation, whereas lack of training and poor training is expected to lead to weak or poor quality implementation. Direct and more extensive supervision is expected to lead to higher quality and more complete implementation, whereas lack of supervision is expected to allow low quality and limited implementation. Principal support for an activity is expected to lead to more extensive implementation and to higher quality implementation.

5. Program structure – manuals, implementation standards, quality control mechanisms.

Greater structure is expected to lead to higher quality implementation and implementation that more closely follows a plan for what should be implemented. Implementation manuals can provide scaffolding for implementers by providing structure, an organization, and a plan for what to do as well as guidance on how to do it. Prepared materials, such as handouts, overhead masters, and videotapes, can make implementation easier and deviation from intended content less likely. Statements of standards for implementation provide the persons implementing a program with a basis for determining whether what is being done is good enough. And quality control mechanisms such as procedures for monitoring progress, review of progress, and worker supervision are expected to promote better implementation by focusing attention on how well implementation is being done.

6. Integration into normal school operations, local initiation, and local planning.

The extent to which program design choices are integrated with normal school operations is expected to have consequences for implementation. Better integration of activities with the regularities of the school is expected to lead to more enthusiastic and widespread adoption of prevention practices within a school. Schools do certain kinds of things as a matter of routine. Preeminently, schools conduct instruction organized in classrooms. Schools employ teachers, supervised by principals, to carry out instruction. Although schools often employ other categories of workers, including counselors, nurses, clerical personnel, and maintenance workers, teachers constitute most of the school workforce and they are the personnel who most often and most directly interact with students. Schools also sometimes utilize the services of volunteers or other persons not in the employ of the school. Unlike regular school employees, the timing, duration, and extent of involvement of these external personnel is only weakly controlled by the school. The extent to which a prevention activity is carried out by regular school employees in the conduct of their accustomed work (i.e., teaching), the more widely implemented it is likely to be. Other things being equal,

administrators are more likely to implement extensively and well activities that involve administration, teachers are more likely to implement activity that involves teaching in their classrooms, counselors are more likely to implement activity that involves counseling in their offices, and nurses are more likely to implement activity that resembles traditional nursing activities.

When activities or arrangements are selected, devised, or planned by persons within a school organization, they are expected to be more acceptable to persons within the school. When locally planned or initiated, activities are (by definition) not imposed upon a school and impulses to resist adoption or implementation which are sometimes triggered by programs imposed upon a school are less likely to be evoked.

When school personnel use information about what and how to implement activities derived from researchers, experts, publications, and other sources, they are expected to incorporate more best practices and to emulate successful models more fully because they are more likely to have the information needed to do so.

7. Program feasibility (match between program design features and regular activities of schools, few obstacles).

Some activities or arrangements are expected to encounter obstacles to implementation. Activities that occur after the end (or before the beginning) of the regular school day or on weekends will be more difficult to implement because they are outside of regular work hours, activities that require transporting students away from the school will be more difficult to implement routinely than those that take place in the school, and activities that are difficult to carry out with a classroom-sized group of students in a 30 to 50 minute period are unlikely to be sustained.

8. Level of disorder.

It is expected that high levels of disorder in a school will make everything more difficult to implement. High levels of disorder may provide impetus to the adoption of prevention programs, activities, and arrangements. But other things being equal, the distractions and emergencies of a disorderly environment are expected to undermine the quality of implementation of such programs, activities, and arrangements.

## **Measures of Hypothetical Predictors of Program Quality**

Measures of the hypothetical predictors of program quality are derived from reports by principals, teachers, implementers, students, and archival sources. Table 5.1 shows the names and sources of each of the different indicators of the predictors. It also shows the number of items and, as appropriate, an alpha individual-level reliability and an estimated lambda reliability

Table 5.1  
*Measures of Hypothetical Predictors of Program Quality*

Category and predictor scale or item name	Source	<i>N</i> items	" <sup>a</sup>	$\hat{\delta}$ .
<b>Organizational capacity</b>				
Morale	TQ	11	.81	.88
Organizational focus	TQ	16	.94	.86
School amenability to program implementation	PQ2	9	.76	–
School amenability to program implementation	AQ	11	.81	.69
Faculty-administration obstacles to implementation	PQ1	12	.76	–
School capacity for program development	PQ1	6	.55	–
Open identification of problems	PQ1	3	.55	–
Teacher-principal communication	PQ1	2	.59	–
Teacher turnover	PQ1	1 <sup>b</sup>	–	–
Program or activity staff turnover	AQ	1	–	.43
School size	PQ1	1	–	–
<b>Leadership and staff competencies, traits, past accomplishments</b>				
Administrator leadership	TQ	12	.84	.88
Leadership behavior	PQ2	19	.90	–
Accomplishment record of principal	PQ2	7	.70	–
Accomplishment record of activity coordinator	AQ	12	.84	–
Conscientiousness of principal	PQ2	20	.90	–
Conscientiousness of activity coordinator	AQ	20	.91	–
Non-delegation of responsibility by principal	PQ1AD	1 <sup>c</sup>	–	–
Broad principal span of control	PQ1AD	1 <sup>d</sup>	–	–
<b>Budget</b>				
Funding for program assured next year	AQ	1	–	.40
Budget control over project activities	AQ	1	–	.44
<b>Organizational support</b>				
Amount of training in classroom management/instructional methods	TQ	1	–	.63
Amount of training in preventing student problem behaviors	TQ	1	–	.70
Quality and quantity of training in discipline	PQ2	8	.91	–
Amount of training in activity/program	AQ	3	.67	.52

*continued . . .*

Table 5.1 (continued)  
*Measures of Hypothetical Predictors of Program Quality*

Category and predictor scale or item name	Source	N items	" <sup>a</sup>	$\hat{\theta}$ .
Quality of training in activity/program	AQ	6	.87	— <sup>e</sup>
Monitoring of conformity of discipline practices with policy	PQ2	1	—	—
Principal's performance appraisal depends on discipline management	PQ2	1	—	—
Supervision or monitoring of implementation of program or activity	AQ	3	.55	.49
Principal support for program or activity	AQ	1	—	.44
Program structure				
Standardization	AQ	5	.72	.45
Integration into normal school operations				
Planning	TQ	9	.62	.84
Local responsibility (school insiders) for program initiation	AQ	14	.82	.50
School district responsibility for program initiation	AQ	4	.77	.57
Variety of information sources used in selection of discipline practices	PQ2	7	.68	—
Variety of information sources used to select program or activity	AQ	7	.70	.51
Amount of provider's job related to program or activity	AQ	1	—	.24
Activity is part of regular school program	AQ	1	—	.27
Provider is full-time	AQ	1	—	.40
Paid workers deliver program or activity	AQ	1	—	.44
Local initiative versus Safe and Drug Free Schools and Communities coordinator initiative	PQ2	1	—	—
Local development of discipline practices	PQ2	5	.68	—
Program or activity feasibility				
Obstacles to program implementation	AQ	12	.74	.44
Activity occurs during the school day <sup>f</sup>	AQ	1	—	.52
Activity occurs in the early evening (6:00 - 9:00 p.m.) <sup>f</sup>	AQ	1	—	.59
Level of disorder/problem behavior				
School safety, teacher perspective	TQ	8	.94	.75
School safety, student perspective	SQ	13	.80	.86

*continued . . .*

Table 5.1 (continued)  
*Measures of Hypothetical Predictors of Program Quality*

Category and predictor scale or item name	Source	<i>N</i> items	" <sup>a</sup>	$\hat{\delta}$ .
Classroom orderliness	TQ	14	.92	.79
Teacher victimization	TQ	8	.61	.72
Student victimization	SQ	7	.61	.68
Selectivity	PQ1	5	.86	–
Problem student magnet	PQ1	3	.81	–
School crime	PQ2	5	.68	–
Gang problems <sup>§</sup>	PQ2	2	.38	–
Last-year variety drug use	SQ	16	.87	.88
Delinquent behavior	SQ	13	.84	.78

*Note.* " = alpha reliability for individual-level measure.  $\hat{\delta}$ . = estimated reliability of school-level aggregate; calculated from unweighted data excluding schools with fewer than 10 students (or teachers) unless 70% of sampled students (teachers) responded. PQ1 = phase 1 principal questionnaire, PQ2 = phase 2 principal questionnaire, AQ = activity coordinator questionnaire, TQ = teacher questionnaire, SQ = student questionnaire, PQ1AD = phase 1 principal questionnaire activity detail booklet.

<sup>a</sup> Value shown for PQ2 is the median alpha for elementary and secondary schools.

<sup>b</sup> Ratio of new teachers this year relative to the total number of teachers. Although the calculation of this item is based on responses to two questions, there is only a single indicator of turnover in the principals' reports.

<sup>c</sup> Percentage of named prevention activities for which the principal listed him/herself as the only person who can provide information.

<sup>d</sup> Percentage of named prevention activities for which the principal listed him/herself as one of the individuals who can provide information.

<sup>e</sup> Questions about quality of training were not answered by respondents who indicated that there was none. Too few schools had multiple responses on training quality to calculate dependable reliability estimate for the school level.

<sup>f</sup> Respondents indicated when the activity occurred using a list of possibilities, including weekends and immediately after school. Only the two time intervals listed here were empirically related to program quality.

<sup>§</sup> Alphas differed greatly for elementary and secondary schools (elementary school principals tended to report few gang problems). Elementary " = .23, secondary alpha = .54.

for the average school.<sup>1</sup> Alpha reliability cannot be calculated and therefore is not shown when construct is represented by only one item per individual respondent. Lambda reliability cannot be calculated and therefore is not shown when there is only one individual (or a very small number of individuals) describing each school. In such cases differences among schools are confounded with individual differences in views or opinions about a school and we cannot estimate the proportion of variance that lies between schools. For the present purposes, the school-level reliability of measures – the column headed  $\hat{\delta}$ . – is of importance. Just as  $\rho$  is conceptually an average inter-item correlation stepped up according to the number of items in a scale, so also is  $\lambda$  conceptually the intraclass correlation (D) stepped up according to the number of respondents per school. It depends on the size of the intraclass correlation and the number of observations per school and so reflects the relative amount of variance between schools as well as the size of the sample.

The information on alphas from Table 5.1 suggests the following interpretations with respect to the measurement of specific activities or programs and individuals:<sup>2</sup> (a) For some measures – perceived morale, perceived organizational focus, perceived amenability to program implementation, perceived administrator leadership, principals' self-reported leadership behavior, accomplishment record of activity coordinators, conscientiousness (principal and activity coordinator), quality and quantity of training in discipline, quality of training in activities/programs, perceptions of local responsibility for program initiation, perceptions of school safety (teacher and student), classroom orderliness, principals' reports of school selectivity and of the attraction of problem students, and student self-reports of drug use – the alphas are relatively high (above .7) implying that respondents tend to provide consistent accounts of their own behavior or how they see the school. (b) In contrast, for some measures alphas are considerably smaller. These measures are either event scales which would not be expected to have high internal consistency, or they have fewer than five items. And (c) for variables represented by single items no estimate of individual-level reliability is available.

The information on lambda-hats from Table 5.1 suggests the following interpretations with respect to the measurement of school characteristics: (a) For some measures – Morale, Organizational Focus, Administrator Leadership, Planning, Safety (both teacher and student reports), Classroom Orderliness, Last-Year Variety Drug Use, and Delinquent Behavior – school

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<sup>1</sup>The item content or illustrative item content of the scales listed in the table may be found in Appendix E. Additional information about reliability, including intraclass correlations (D), is provided in Appendix F. Tables of correlations among measures are shown in Appendix G. Descriptive information, generally tables showing means for the measures by school level and location and (for activity questionnaires) by program category, is provided in Appendix H.

<sup>2</sup>Some measures are not intended to apply to individuals. For example, school safety should be considered to be a characteristic of a school rather than of individuals. When scored at the individual level, a score on a safety scale reflects individual differences in perception as well as the influence of the school environment on these perceptions.

characteristics appear to be reliably measured as lambda-hats are all .75 or above. (b) In contrast, for some measures – program or activity staff turnover, whether funding is assured for the following year, degree of budget control over activities, the degree of principal support for programs or activities, Standardization, amount of provider’s job related to the program or activity, whether activities are part of the regular school program, whether the provider is a full-time worker, whether paid workers deliver the program or activity, and Obstacles to Program Implementation – school characteristics are not measured with high reliability as lambda-hats are all .45 or below. Low school-level reliability is to be expected when there is a great deal of heterogeneity within schools. For example, if some programs or activities involve a great deal of local responsibility for program initiation and others within the same school involve very little such responsibility, then within-school variability can be high relative to between school variability. This appears to be the case. The individual-activity-level reliability (alpha) for Local Responsibility for Program Initiation was a relatively high .82, but the school-level reliability (lambda-hat) for this scale was a more modest .50.

In general, the school-level assessments based on teacher or student surveys using scales from the Effective School Battery (G. Gottfredson, 1984/1999; Morale, Administrator Leadership, Planning, Safety, Victimization), which were developed to measure school characteristics, are satisfactory. This is also true of the Organizational Focus scale (G. Gottfredson & Holland, 1997) which was developed to measure differences among organizations, and also of the Last-Year Variety Drug Use, and Delinquent Behavior scales (G. Gottfredson & Gottfredson, 1999) which were developed to measure individual differences but are shown in Table 5.1 to produce reliable measures of schools as well.

## **Correlations Between Characteristics of Activities and Indicators of Activity Quality**

We turn now to a summary of the relations between the hypothesized predictors of program quality and our indicators of quality. Additional empirical links are also examined, but we warn the reader that the lack of explicit hypotheses makes this extended review something of a fishing expedition. The following paragraphs review correlations between characteristics of activities and indicators of activity quality.<sup>3</sup> The correlations described are based on unweighted sample

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<sup>3</sup>Appendix Tables H5.1 through H5.3 show correlations between the hypothesized predictors of program quality and the indicators of program quality. The tables are organized according to the following general categories: Characteristics of the activity (Appendix Table H5.1), characteristics of the program coordinator (Appendix Table H5.2), and the origin of the activity and its funding sources (Appendix Table H5.3). These tables use data only from the activity questionnaires ( $n=3,702$ ). Recall that certain quality indicators were scored only for certain types of activities. Similarly, certain predictors are meaningful only for certain types of activities. The range of numbers of activity questionnaires on which each correlation is based are shown for each quality indicator in the table column heads.

data, and so should technically be taken as estimates of correlation in our sample rather than in the population of prevention activities.<sup>4</sup> The following chapter summarizes results from all sources, including correlations between average activity or program quality at the school level and other school-level variables. An examination of school-wide disciplinary practices is deferred until school-level variables are examined. Here we examine the empirical associations between characteristics of prevention activities and their quality of implementation. We begin with the results concerning hypothesized predictors, and then examine results for other variables.

### **Evidence About Hypothesized Predictors**

*Capacity.* As hypothesized, program coordinators' views of the schools' amenability to program implementation was positively and significantly correlated with six of the eight indicators of program quality. Correlations ranged from .00 to .12, *Mdn* = .08. Although correlations are small, their direction supports the hypothesis. In contrast, the median correlation between program or activity staff turnover and the eight measures of activity quality is .04. Correlations range from -.02 to .07, and confidence intervals for only three of the positive correlations do not include zero. Contrary to the hypothesis, activities where staff have been replaced because they left or were dismissed are of slightly better quality than those with more stability. Possibly poor staff are replaced by better implementers. Correlations are very small, however (see Appendix Table H5.1).

*Program coordinator accomplishments and traits.* More conscientious program coordinators, and coordinators with a record of more program-related accomplishments coordinate programs with better implementation. For conscientiousness, the confidence intervals for correlations with four of the eight quality indicators are positive (.04 to .08) and do not

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<sup>4</sup>Statements about statistical significance and confidence intervals are based on an assumption of simple random sampling. Once weights adjusting for sampling probabilities and nonresponse became available, we recalculated correlations and significance levels for the variables examined in Appendix Table H5.3 (i.e., correlations between activity quality and origins and sources of funding) to learn whether the application of weights and the use of resampling to estimate standard errors would have led to different interpretations. Appendix Tables H5.4 through H5.6 show side-by-side comparisons of correlations estimated with and without weights. Standard errors estimated by resampling are usually slightly larger than those estimated using the assumption of simple random sampling, and the correlations occasionally bounce a bit when weights are applied. But conclusions would not generally differ depending on the estimation method used. For example, the largest correlation in Appendix Table H5.4 is the .24 correlation between the use of best practices (methods) and school insider responsibility for starting the program. The correlation rounds to .24 whether weighted or unweighted data are used; the 95% confidence interval for the correlation is .193 - .284 under the assumption of simple random sampling and is .163-.309 when the standard error is estimated by resampling. Because results are so similar, in examining correlations, we decided not to apply weights or to use resampling to estimate sampling errors.

include zero. For accomplishment, the confidence intervals for correlations with five of the eight quality indicators are positive (.05 to .13) and do not include zero. One correlation is negative (! .11) and significantly different from zero: For the subset of program types for which frequency of staff participation was measured, staff participate less in the programs run by coordinators with a record of more past accomplishments. Although all are small in size, these correlations generally suggest that selecting coordinators who are higher in conscientiousness and who have a track record of past accomplishments would improve the quality of program implementation. The associations are in the small range, however (see Appendix Table H5.2).

*Budget and support.* We hypothesized that programs with more secure funding and programs in which the coordinator had more control over the budget for the activity would be better-implemented. These hypotheses are generally not supported (Appendix Table H5.3). Programs whose funding is more secure for the next school year are more likely to expose a greater proportion of students and have slightly higher ratios of providers to students, but they are also slightly less likely to make use of “best practices.” The median correlation of assured funding for the next year and the eight measures of quality is only .02. Programs whose coordinators have more control over the budget are more likely to expose a greater proportion of students, but this is the only association out of eight possible for which the confidence interval for the correlation (.12) does not include zero. The median correlation is only .02.

*Organizational support.* The level of supervision, quality of training, amount of training, and principal support for the prevention activity were hypothesized to predict the quality of implementation. The evidence generally supports the importance of these four variables. Of the 32 relevant correlations, 25 are statistically significant and in the expected direction. No significant result is in the unexpected direction. Moreover, the correlations are often moderate in size. For level of supervision, correlations with the eight quality criteria range from .00 to .25, *Mdn* = .14; for training quality correlations range from ! .03 to .15, *Mdn* = .10; for amount of training correlations range from .02 to .18, *Mdn* = .14; for principal support correlations range from ! .01 to .21, *Mdn* = .13 (see Appendix Table H5.1). Table 5.2 shows mean scores for selected indicators of program quality as a function of those indicators of organizational support that best predicted quality.

*Standardization.* Standardization of program materials and methods is also related to higher quality implementation, supporting the hypothesis. Programs scoring higher on the Standardization scale (i.e., activities with manuals; that include reproducible materials; use videos, films, etc.; provide lists of materials to be used; and specify the activities to be carried out are used more regularly) reach more students, and incorporate a greater percentage of “best practices” than less structured programs. Correlations for six of the eight measures of program quality are positive and their confidence intervals do not include zero (range of correlations = ! .03 to .23, *Mdn* = .08). See Appendix Table H5.1 for details. Table 5.3 shows mean scores for selected indicators of program quality as a function of those indicators of standardization that best predicted quality.

Table 5.2  
*Activity Quality by Indicators of Organizational Support*

Indicator of organizational support	Proportion “best practices” used — content			Proportion “best practices” used — methods			Frequency of participation — staff			Frequency of operation		
	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>
Amount of training												
Low	.68	.64-.72	235	.49	.45-.52	445	2.65	2.33-2.97	206	2.51	2.42-2.61	469
Moderate	.69	.65-.74	310	.56	.53-.59	535	2.91	2.60-3.22	260	2.71	2.64-2.78	556
High	.74	.70-.77	407	.55	.53-.58	683	3.20	2.87-3.54	696	2.77	2.72-2.82	590
Quality of training												
0-3	.64	.57-.72	122	.50	.45-.55	217						
4-5	.70	.65-.76	175	.55	.51-.59	298						
6	.76	.73-.80	325	.56	.53-.59	536						
Level of supervision												
None				.45	.41-.49	271				2.52	2.40-2.65	220
Minor				.50	.46-.53	611				2.63	2.54-2.71	498
Moderate				.57	.55-.60	659				2.73	2.66-2.79	564
High				.64	.60-.68	344				2.89	2.85-2.94	285
Principal support												
None				.47	.41-.53	162	1.51	1.09-1.93	28			
Some				.47	.44-.50	649	2.53	2.20-2.85	186			
Much				.59	.57-.61	1085	3.11	2.91-3.31	564			

*Note.* Associations are shown on this table only when the absolute value of the unweighted correlation is greater than or equal to .15 and is significantly different from zero ( $p < .01$ ). CI = 95% confidence interval for the mean. *N* = unweighted number of activities.

Table 5.3  
*Activity Quality by Standardization and Time*

Activity characteristics	Proportion “best practices” used — content			Intensity			Frequency of participation — staff		
	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>
Standardization									
Low	.62	.57 - .66	270						
Moderate	.72	.68 - .75	344						
High	.75	.72 - .78	443						
Program takes place									
During the school day									
Yes				14.72	9.96 - 19.49	1407	2.85	2.65 - 3.05	456
No				-12.91	-22.72 - -3.09	342	2.24	1.94 - 2.54	167
In the early evening									
Yes				-22.33	-33.46 - -11.19	309			
No				16.47	11.88 - 21.05	1412			

*Note.* Associations are shown on this table only when the absolute value of the unweighted correlation is greater than or equal to .15 and is significantly different from zero ( $p < .01$ ). CI = 95% confidence interval for the mean. *N* = unweighted number of activities.

*Integration into normal school operations.* The hypotheses about integration into normal school operations received stronger support from the data. When school insiders have greater responsibility for initiating a program, the program is more often implemented in a higher quality fashion. Correlations between school insider responsibility and seven of the eight quality indicators had non-zero correlations (ranging from .09 to .24). The remaining correlation between this measure of integration into school operations was in the opposite direction to that hypothesized,  $-.07$ . The median correlation between insider responsibility and measures of quality was .15. Programs for which the school district or researchers had more responsibility for initiation also have generally positive, non-zero correlations with the quality indicators, but they are not as large and not as consistent across indicators as are those with school insider initiation (district personnel range = .03 to .20,  $Mdn = .08$ ; researchers range = .00 to .13,  $Mdn = .08$ ). Appendix Table H5.3 also shows a consistently positive association between program quality and local *development* of the activity, but these associations are of very small magnitude. Researcher-developed programs (although relatively rare compared with non-researcher-developed programs) also have a slight advantage on five of the eight indicators of quality.

Another indicator of integration into normal school operations is the extent to which the program was selected after a deliberate attempt to seek information about what would work in the school. Programs or activities selected after a more extensive information search are, as expected, implemented in a higher quality fashion. Correlations with seven of the eight quality indicators with the number of different sources of information used to select an activity are greater than zero and in the positive direction. (Appendix Table H5.3 shows that the range of correlations is from  $-.01$  to .18,  $Mdn = .10$ ). Activities selected after using many sources of information are especially likely to incorporate “best practices” with respect to content.

Programs whose coordinator’s jobs are more dedicated to the program, whose coordinators work full-time in the school, which are not delivered by volunteers, and that are part of the regular school program were also hypothesized to be better-implemented. These hypotheses are strongly supported. Of the 32 relevant correlations, only three are not in the expected direction and the confidence intervals for these include zero. Twenty-three (23) of the relevant correlations are statistically significant. Although most of these correlations are in the small range, a few are of moderate magnitude (details are in Appendix Table H5.1).

Table 5.4 shows selected indicators of program quality as a function of those indicators of integration into normal school operations that best predicted quality.

The evidence supports the contention that one way to improve the quality of implementation of prevention programs is to ensure that they are better integrated into normal school operations. More extensive local planning and involvement in decisions about what to implement, use of regular school staff as implementors (particularly when a larger portion of their regular job is dedicated to the activity), and incorporation of the activity as a regular part of the school’s program all predict higher quality implementation.

Table 5.4  
*Activity Quality by Indicators of Integration Into Normal School Operations*

Integration indicator	Proportion “best practices” used — content			Proportion “best practices” used — methods			Intensity			Frequency of participation — staff			Proportion students exposed or participating			Frequency of operation		
	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>
How much responsibility for starting program?																		
School district personnel																		
None	.65	.61-.70	250							2.60	2.24-2.97	177						
Not much	.70	.66-.74	344							2.72	2.44-3.00	260						
Much	.73	.69-.77	274							2.97	2.57-3.36	201						
Very much	.82	.76-.88	113							3.86	3.47-4.26	95						
School insiders																		
None				.36	.28-.44	58				2.60	1.55-3.65	15	.33	.23-.42	77	2.46	2.19-2.72	43
Not much				.52	.50-.54	1268				2.62	2.38-2.87	375	.36	.34-.39	1651	2.61	2.56-2.67	1080
Much				.62	.59-.66	417				3.16	2.90-3.43	319	.50	.45-.55	507	2.76	2.70-2.82	551
Very much				.68	.45-.91	14				4.23	3.49-4.97	28	.62	.42-.83	23	2.88	2.74-3.02	35
Was information from research publications used to select program?																		
Yes	.76	.73-.79	431															
No	.66	.63-.70	528															

*continued . . .*

Table 5.4 (continued)  
*Activity Quality by Indicators of Integration Into Normal School Operations*

Integration indicator	Proportion “best practices” used — content			Proportion “best practices” used — methods			Intensity			Frequency of participation — staff			Proportion students exposed or participating			Frequency of operation		
	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>	<i>M</i>	CI	<i>N</i>
Number of different sources of information used to select program																		
0-1	.64	.60-.68	267															
2	.70	.64-.76	127															
3-6	.78	.75-.81	421															
Program run by volunteers																		
Yes	.60	.53-.68	67				-.24	-.34- -.14	430	2.37	2.11-2.63	268						
No	.76	.73-.78	544				.08	.03-.12	2094	3.21	3.01-3.41	491						
Amount of provider’s job related to program																		
Incidental							-.23	-.34- -.12	287	2.11	1.76-2.47	94				2.35	2.22-2.48	224
Minor							-.06	-.13-.00	757	2.83	2.58-3.07	426				2.64	2.59-2.70	898
Major							.19	.10-.29	493	3.58	3.20-3.97	159				2.87	2.82-2.91	433
Primary							.10	.00-.21	435	3.15	2.60-3.70	83				2.73	2.62-2.84	231
Program part of regular school program																		
Optional													.33	.30-.36	1331	2.54	2.48-2.61	919
Required													.54	.49-.58	504	2.81	2.76-2.86	526
Required and monitored													.42	.37-.46	503	2.79	2.72-2.85	358
Provider work in school?																		
Yes																2.69	2.64-2.74	1164
No																2.44	2.31-2.58	219

*Note.* Associations are shown on this table only when the absolute value of the unweighted correlation is greater than or equal to .15 and is significantly different from zero ( $p < .05$ ). CI = 95% confidence interval for the mean. *N* = unweighted number of activities.

*Feasibility.* We asked program coordinators to indicate to what extent their activity depended upon special arrangements or materials not usually readily available in schools. We expected that the number of such “obstacles” named would predict poorer implementation. The data produce mixed results relevant to this hypothesis. As expected, more obstacles are associated with somewhat less frequent staff participation and less frequent program operation. But more obstacles are also associated with somewhat higher scores on the “level of use” scale, and a higher proportion of best practice methods used. All correlations with the number of obstacles were small (ranging from -.10 to .07), and only half were significantly different from zero (details are in Appendix Table H5.1).

The time of day when the program or activities are conducted was also expected to predict its degree of implementation. The data reveal that the intensity, frequency of staff participation, and proportion of students exposed are higher for activities that take place during the school day, although the quality of the content and methods are not necessarily higher for activities that operate at this time. Programs or activities taking place before the school day also get higher staff participation and regularity in operation. The data are mixed for after-school programs: two indicators of staff participation are slightly higher for after school programs, but a significantly smaller proportion of students are exposed, the intensity is lower, and the quality of the program content is lower in these programs than in programs run at other times. Programs run in the evening and at night are also less intense. Details are shown in Appendix Table H5.1. Table 5.3 shows mean scores for selected indicators of program quality as a function of those times of day most associated with frequency of staff participation and program intensity.

*Summary.* We found substantial support for the following hypotheses:

1. Greater levels of conscientiousness and past accomplishments on the part of the program coordinator are associated with better quality of program implementation. The associations are small, however.
2. Better integration of the activity into normal school operations is associated with higher quality programming. More extensive local planning and involvement in decisions about what to implement, use of regular school staff as implementors (particularly when a larger portion of their regular job is dedicated to the activity), and incorporation of the activity as a regular part of the school’s program are associated with higher quality implementation.
3. Greater organizational support is associated with higher quality implementation. More training, higher quality training, more supervision, and higher levels of principal support for the prevention activity should increase the quality of implementation.
4. Greater standardization of program materials and methods is associated with higher quality implementation.

Support for the importance of perceived school amenability to program implementation, budget control and program feasibility was mixed. The importance of budget control and certainty of continued funding was not supported, and the quality of programming is generally not enhanced by the absence of unusual program requirements. Programs run during the school day or just before school are, however, generally of higher intensity than programs run at other times.

### **Other Program or Activity Characteristics**

Several additional characteristics of prevention programs measured in the program coordinator surveys were not specifically hypothesized to predict program quality and intensity but are of interest. These characteristics are discussed now.

*Source of funding.* Correlations between the activity quality indicators and the specific sources of funding for the activity are not large, but some interesting patterns emerge. Activities which are “institutionalized” in the sense that they are funded by their own school district are delivered with slightly greater intensity, greater frequency, and a higher level of use than programs that are not funded in this manner, but they are not necessarily of higher quality in terms of their content and methods. Programs funded through the Safe and Drug Free Schools and Communities Program (a Federal program that distributes approximately a half billion dollars per year to schools for prevention activities) make more use of best practices with respect to content but SDFS funding has only small (.08 or less in absolute value) correlations with other indicators of program quality.<sup>5</sup> These and other results are presented in detail in Appendix Table H5.3. Correlations are generally small between sources of funding and indicators of quality.

*Cultural appropriateness.* As the country’s school population has become increasingly diverse, and as sensitivity about insensitive and inappropriate curricular materials or interpersonal approaches has increased in recent years, many educators and prevention workers have become increasingly concerned with the “cultural appropriateness” of prevention materials and methods. In surveys, we asked activity coordinators to indicate whether their activities were specially tailored for a particular group (e.g., females, African Americans, gay or lesbian youths); intended to foster understanding, respect, or appreciation for the diverse needs, traditions, or situations of particular groups (e.g., males, persons of different ethnic origins, persons of different religion); or used materials or methods culturally appropriate for the students served. Programs or activities that are specially designed to foster understanding for persons of different ethnic origins, cultural heritages, languages, etc. are better implemented in some ways than programs not so tailored, but the associations are very small, ranging from -.03 to .14, *Mdn* =

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<sup>5</sup>One speculation is that this pattern may result because SDFS-funded activities are more likely to make use of canned programs than activities without this source of funding. For example, of activities for which SDFS support was reported, 9% are D.A.R.E. programs, which use a higher proportion of best practices with respect to content, but which has failed to incorporate best practices with respect to method.

.04. The evidence is inconsistent for programs that are *pecially tailored* for at least one of eight different groups listed (e.g., African Americans, Asian Americans, males). These programs make use of a slightly higher proportion of best practices with respect to methods, but they are less frequently operated than other programs. Correlations range from  $-.07$  to  $.08$  with the measures of quality,  $Mdn = .02$ . The program coordinator's perception of the program activity as "culturally appropriate" is slightly positively related to most indicators of program intensity and use, but not with the use of research-based content and methods. These correlations are also small. All the correlations are displayed in Appendix Table H5.1.

*Characteristics of the population.* Data were scrutinized to learn whether there were correlations between indicators of program quality and the specific groups targeted by the program or activity. For the most part, these correlations suggest that the population targeted is not much associated with the quality of the program. An exception is the expected observation that universal programs (programs directed at no special group) serve higher proportions of students than do targeted programs. A second (fortunate) exception is that activities directed at problem students or students about to be expelled involve lower proportions of students. Aside from these exceptions, the correlations are small and inconsistent across the different indicators of program quality. Details are presented in Appendix Table H5.7.

*Activity objectives.* Activity coordinators were presented with a list of potential activity objectives and asked to identify those addressed by the program or activity. This allowed an examination of the relations between specific activity objectives and activity quality, as well as an examination of the relation between the breadth of an activity's objectives (the number of different objectives identified) and program quality. The most striking finding is that the breadth of the program's objectives is significantly positively correlated with seven of the eight indicators of program quality and quantity, and for best practices with respect to content the correlation is large. The correlations range from  $.00$  to  $.43$ ,  $Mdn = .10$ . Correlations of program quality with the various specific objectives are generally slightly positive, and are generally moderately positive with the indicator of best practices with respect to content (two exceptions being programs targeting religious beliefs and parental supervision). The correlations between best practices (content) and the thirteen specific objectives range from  $-.07$  to  $.30$ ,  $Mdn = .22$ . Programs targeting social skills and competencies as objectives do not have a very favorable pattern of correlations with the quality indicators. This type of program has been identified in efficacy research as one of the potentially most effective in terms of its effects on problem behavior. The present results imply that as applied in schools such programs typically do have a larger proportion of best practices with respect to content (by definition), but that they less often use best practices with respect to methods, are less intense, and expose a smaller proportion of students to the activity than do programs without social skills objectives. Details of the relations between activity objectives and the eight quality indicators are presented in Appendix Table H5.8.

*Activity content.* Correlations of measures of program quality with specific activity categories (expressed as dummy variables) are simply a different way of expressing the associations between program type and quality of implementation discussed in Chapter 4 (and

summarized in Table 4.7). Nevertheless, such a table of correlations is presented in Appendix Table H5.9. That table also shows correlations with the multi-component nature of a program or activity and whether it is a packaged program. (Recall that a multi-component program is one that was identified by the school administrator responding to the principal survey for program identification as belonging to multiple categories, and that a “packaged” program is an activity recognizable as a widely marketed product such as D.A.R.E. or Assertive Discipline.) Although we found evidence (just described) that programs targeting more objectives are implemented with higher quality than are programs with narrower objectives, we also see evidence that when a program activity is one component in a larger activity that contains several different types of activities, its implementation quality may suffer. The correlations between multi-component status and the eight quality indicators are small and only reach statistical significance for two of the eight indicators – in both cases negatively correlated with quality. Correlations range from  $-.06$  to  $-.02$ ,  $Mdn = -.04$ . These results argue against claims that multi-modal programming will be more effective. Although we have no data on the effectiveness of these programs for achieving their objectives, the correlations (presented in Appendix Table H5.9) suggest that multi-component programs are not particularly well implemented in practice.

The pattern of results is similar for packaged programs. When all packaged programs are grouped together, the evidence suggests that they are not as well implemented as home-grown or less well-known programs. The correlations (Appendix Table H5.9) are small, however. In the following sections, we examine packaged and multi-component programs more closely.

Table 5.5 provides a summary of those hypotheses that were supported by examination of the activity-level data, and it provides a summary of the most striking findings from the exploratory data analyses.

## **A Closer Look at Specific “Packaged” Programs**

Aggregating all eleven “packaged” or “canned” programs into one category as was done in the examination above may disguise important differences among them. In this section we describe the quality of the two canned programs that were over-sampled -- D.A.R.E. and peer mediation. Among the 1,087 packaged programs that principals named on the Phase 1 survey were 305 D.A.R.E. and 308 peer mediation programs. These were sampled with probability equal to 1.0 in Phase 2. From these sampled programs, 174 (57%) and 142 (46%) completed Activity Questionnaires were returned. D.A.R.E. programs were described in these returned questionnaires primarily as prevention curricula (48%) and uses of external personnel resources (38%), and less often as programs to improve the culture or climate of the school (9%). Peer mediation programs were described primarily as programs to involve youths in discipline (54%). Peer mediation activities were listed under a number of other categories as well (e.g., as prevention curricula or counseling programs).

Table 5.5  
*Summary of Activity-Level Correlates of Quality of Implementation*

Hypotheses supported by the data
<ol style="list-style-type: none"> <li>1. Greater levels of program coordinator conscientiousness and coordinator's record of past accomplishments are slightly associated with better quality of program implementation.</li> <li>2. Better integration of the activity into normal school operations is associated with higher quality implementation. More extensive local planning and involvement in decisions about what to implement, use of regular school staff as implementors (particularly when a larger portion of their regular job is dedicated to the activity), and incorporation of the activity as a regular part of the school's program are associated with higher quality implementation.</li> <li>3. Greater organizational support is associated with higher quality implementation. Specifically, more training, higher quality training, more supervision, and higher levels of principal support for the prevention activity are associated with higher quality of implementation.</li> <li>4. Greater standardization of program materials and methods is associated with higher quality implementation. This means that activities for which there is a manual, written descriptions of specific activities or methods to be carried out, prepared materials such as visual aids, lists of materials, or reproducible materials are better implemented.</li> </ol>
Patterns revealed by the data (although not hypothesized)
<ol style="list-style-type: none"> <li>5. Activities which are "institutionalized" in the sense that they are funded by their own school district are delivered with slightly greater intensity, greater frequency, and a higher level of use than programs that are not funded in this manner, but they are not necessarily of higher quality in terms of their content and methods.</li> <li>6. The breadth of programs' objectives is positively associated with program quality and quantity.</li> <li>7. Multi-component programs (i.e., those involving several different categories of preventive activity) are not as well implemented as single category programs, although the association is small.</li> <li>8. "Packaged" or "canned" programs as a group are not as well implemented as "home-grown" programs, although the association is small.</li> </ol>

When the quality of these packaged programs is compared with the quality of *all* other prevention activities, we see very little difference: the average percentage of quality dimensions judged adequate is 55% for D.A.R.E. programs compared with 57% for all other programs. Similarly, the average percentage of quality dimensions in peer mediation programs judged

adequate is 62% compared with 57% for all other programs. But this comparison is again too general because it compares a specific type of prevention activity with a hodgepodge of different types.

Tables 5.6 and 5.7 compare D.A.R.E. and peer mediation programs with other activities of the same type. These comparisons are limited to seventy-one D.A.R.E. programs that were listed as prevention curriculum and the seventy-seven peer mediation activities that were listed as activities to increase youth participation in discipline. These are compared with all other activities in the same category.<sup>6</sup>

Table 5.6 shows that compared with other prevention curricula employed in schools, D.A.R.E. involves about half as many lessons, and exposes 21% (compared to 48%) of the students in the school (D.A.R.E. is typically delivered only to fifth graders). The average duration and ratio of providers to students in the school is also lower for D.A.R.E. programs than for other curricular programs. Several of the quality indicators are not scored for programs that involve youth in discipline, but two of the three available indicators in Table 5.6 favor peer mediation over other similar programs. Peer mediation programs are used more regularly by staff and are operated on a more continuous basis throughout the school year, but they also involve a lower ratio of providers to students in the school.

The ratings of adequacy shown on Table 5.7 are more favorable for both D.A.R.E. and peer mediation. D.A.R.E. programs are rated “adequate” more often on all dimensions except for the use of best practice methods,<sup>7</sup> and the difference is statistically significant for the overall rating and for two of the specific dimensions – duration (for which a response of more than a month receives a rating of adequate) and frequency of student participation (for which a response of “weekly” or more receives a rating of adequate). Peer mediation programs tend more often to be rated “adequate” on the three dimensions examined, statistically significantly for the frequency of operation. These packaged programs are implemented in a more homogeneous fashion than other programs as indicated by lower standard deviations, and their characteristics cluster more closely around the cut-points selected for adequacy. D.A.R.E. is more likely than the average other instructional program to meet our criteria for an “adequate” program, even though the average quality of the program is likely to be somewhat lower.

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<sup>6</sup>Including D.A.R.E. or peer mediation programs that were identified by principals as belonging to a category other than the modal category would be awkward because parallel information is not available for all variables from the activity coordinator questionnaires. Packaged programs other than D.A.R.E. and peer mediation are included in the comparison group.

<sup>7</sup> A common criticism of D.A.R.E. is that it does not make use of state-of-the-art instructional methods. In particular, it relies heavily on didactic rather than interactive teaching methods.

Table 5.6  
*Mean Level of Use, Intensity, and Best Practices, Selected Packaged Programs*

Quality indicator	Prevention curriculum		Youth participation in discipline	
	D.A.R.E. (n=61-69)	Other (n=226-303)	Peer mediation (n=69-75)	Other (n=77-92)
Proportion "best practices" used — methods	.49	.47	—	—
Proportion "best practices" used — content	.85	.80	—	—
Intensity				
Number of lessons/sessions	15.36*	30.51	—	—
Number of lessons or sessions (natural log)	2.78	2.94	—	—
Duration	4.98*	5.24	—	—
Frequency of participation — students	3.05	3.12	—	—
Frequency of operation	—	—	2.88*	2.53
Level of use by school personnel	3.62	4.01	4.57*	4.19
Proportion of students exposed or participating	.21*	.48	—	—
Ratio of providers to students in school 100 (ln (ratio + 1))	.44*	2.38	.75*	2.62

*Note.* Duration responses range from 1 (less than a day) to 7 (more than one full school year). Frequency of participation ranges from 1 (monthly or less often) to 6 (more than once a day). Level of use responses range from 1 (at least one person in school knows about activity) to 5 (one or more persons is conducting activity on a regular basis). Frequency of operation ranges from 1 (special occasions once or twice a year) to 3 (continually throughout school year). Frequency of staff participation was not ascertained for prevention curricula or activities involving youth participation in discipline. Although information about the proportion of students exposed to peer mediation was sought, respondents failed to report data for sixty percent of the activities in the analysis.

\*95% confidence interval for the difference between the means for the selected packaged and other programs does not include zero.

Additional exploratory analyses were conducted to compare D.A.R.E. and peer mediation activities with other activities in their respective model categories.<sup>8</sup> Peer mediation programs are generally similar to other programs that involve youths in discipline-management roles in our sample. A greater percentage of peer mediation programs in our sample received funding

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<sup>8</sup>Appendix Tables H5.10 through H5.18 show comparisons of the two packaged programs with other programs listed in the same categories. We did not conduct statistical tests that take the complex sample into account to compare the significance of differences between the weighted proportions for packaged and other programs in the population. Statements about differences in the text refer to differences observed in our sample, rather than the population. Had our sample been a simple random sample from the population, the differences mentioned would all have been significant at the  $p < .01$  level.

Table 5.7

*Proportion of Programs Judged Adequate, Selected Packaged Programs*

Judged adequate	Prevention curriculum		Youth participation in discipline	
	D.A.R.E. (n=64-67)	Other (n=226-300)	Peer mediation (n=74-77)	Other (n=77-92)
Proportion "best practices" used — methods	.22	.28	—	—
Proportion "best practices" used — content	.85	.74	—	—
Intensity				
Number of lessons/sessions	.61	.58	—	—
Duration	.89*	.75	—	—
Frequency of participation — students	.93*	.63	—	—
Frequency of operation	—	—	.92*	.70
Level of use by school personnel	.57	.52	.70	.62
Proportion of students exposed or participating	—	—	—	—
Overall quality of program or activity	.67*	.57	.75	.64

*Note.* Adequacy judgments were not made for either prevention curriculum or youth participation in discipline for two dimensions: (a) frequency of staff participation, and (b) ratio of providers to students in the school. Although information about the proportion of students exposed to peer mediation was sought, respondents failed to report data for sixty percent of the activities in the analysis; adequacy judgments were not made on this dimension for prevention curricula.

\*95% confidence interval for the difference between the proportions for the selected packaged and other programs does not include zero.

through the Safe and Drug Free Schools and Communities program, and a higher percentage were selected after using information from marketing brochures or videos or from publications summarizing research. Compared to other activities in this category in our sample, they tend to be more standardized and have higher quality training.

D.A.R.E. programs are markedly different from other instructional programs described in our sample. The D.A.R.E. programs more often cover violence and drug topics and were less likely to cover other topics such as etiquette, sex, culture or history. D.A.R.E. relies more on lecture and individual seat-work and less on activities such as computerized multi-media features, "active" or "experiential" teaching, and computer-assisted learning (although D.A.R.E. relies on role-playing more than other curricular programs in our sample). The D.A.R.E. programs in our sample were more likely to have as objectives reducing problem behavior, reducing gang participation, and increasing knowledge about the law; and less likely to have as

objectives a number of other precursors of problem behavior, including academic performance, job skills, norms, and school organizational capacity for self-management. D.A.R.E. programs are also more standardized than other programs, and the amount and quality of training for D.A.R.E. programs is higher than for other activities.

D.A.R.E. programs are more likely to be staffed by personnel who do not ordinarily work in the school, but they have less staff turnover than do other programs. Conducting the program is a bigger part of the job responsibilities of D.A.R.E. providers than conducting other instructional programs are for the providers of those other programs.

Perhaps the most striking differences between D.A.R.E. and other instructional programs in our sample have to do with their integration into the school. D.A.R.E. programs are much more likely to be “imposed” on a school than other programs. Their funding less often comes from the school district’s budget and more often comes from external government or private funding. Somebody outside of the school is more likely to have budget control over the activities. The responsibility for initiating the activity in the school is more likely to be external to the school building.

*Summary.* When all “packaged” programs are grouped together, the evidence suggests that they are not as well implemented as home-grown or less well-known programs. When specific packaged programs are compared with other programs of a similar type, the evidence suggests that D.A.R.E. programs have a lower implementation level and peer mediation programs a higher implementation level than other activities in their respective categories. But both of these programs are nevertheless more likely to be judged “adequate” than are other programs in the same category. Put another way, the representatives of these two programs in our sample were more likely than other programs in their categories to meet the minimum criteria we set for adequacy despite being of poorer quality on average. The standardization and training that more often characterizes these programs in our sample may protect them from extremely poor quality, but may not require high quality.

The results suggest ways to improve D.A.R.E. programs. Lengthening the program and targeting a larger proportion of students would bring it more in line with competing options. D.A.R.E. programs are superior to other curricular activities in our sample in the amount and quality of training and the level of standardization. They suffer by comparison to other curricular activities in our sample on two main dimensions: the high level of lecture and seatwork, and the relatively poor integration into the school in general. One could imagine an improved D.A.R.E. model or a replacement model which would involve a greater level of teacher investment and participation. Such a model might be of benefit to students by encouraging regular teachers to reinforce the lessons in other parts of the curriculum.

## A Closer Look at Planning Activities

Several of the results discussed so far suggest that local planning and involvement in decisions about what to implement increases the quality of implementation. In this section we examine local planning activities in greater detail.

One category of prevention activity is “interventions involving a school planning structure or process to manage change.” More than half of the principals (57%) in the study reported the presence of such an activity in their schools, and we sent specially tailored questionnaires to 476 coordinators of sampled planning activities. We received useable responses for 50% of the program coordinator surveys describing these planning activities. Most (80%) of these planning activities include persons from outside the school; two-thirds use “school consultation” models which involve seeking professional advice on school practices or problem-solving; slightly more than one-half involve students in school decision-making roles (41% of elementary, 76% of middle/junior, and 84% of high school programs involve students). The school principal or another administrator is most often responsible for conducting or leading the planning activity (93%), followed by a certified teacher (76%) and a counselor or school social worker (62%).<sup>9</sup> These activities generally take place after school or in the evening, and the persons participating are generally volunteering their time because the activity is not part of their regular school duties. These individuals are, however, primarily full-time workers in the school. Program coordinators for this activity generally have more extensive records of accomplishment than coordinators of other types of activities.

More than 80% of these activities involve the following (in order of prevalence): development of action plans, use of information about the school, identification of goals, evaluation of outcomes, monitoring of planned activities, action teams, use of information about effective practices, and analysis of potential obstacles. Seventy-one percent involve a formal needs assessment. Of all types of activities, planning and change management programs ranked highest in the percentage with the objective of improving the school’s capacity for self-management by, for example, strengthening its leadership, morale, or involvement of parents or staff in planning for school improvement. Planning or change management programs are also more likely than other types of programs to have been initiated by school insiders.

We saw earlier that school planning activities were among the higher quality programs, with the mean percentage of quality dimensions judged adequate 71% for this type of activity compared to the 57% average across all types of programs. The higher score results primarily from planning’s higher than average “level of use” in the school (4.45 on a scale of 5), and because these activities generally last longer than other activities.

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<sup>9</sup>Respondents marked yes or no for a list of personnel who may be involved in leading or conducting the planning activities. In retrospect, it appears that many respondents marked answers as if the question asked who participated in the activity.

Embedding a prevention program in a structured local planning effort should increase the quality of the prevention activity because rational planning and data guidance should increase the fit between the activity and the school environment. Locally planned activities should more explicitly take into consideration the unique strengths and weaknesses of the organization, the characteristics of the student population, and the surrounding community. If a planning activity involves the participation of members of the school community, it is expected to generate greater commitment among the individuals who will have to carry out the plans that are made. This hypothesis might be tested by comparing the quality of implementation of multi-component activities that include a planning activity with similar preventive activities conducted without a planning activity. Unfortunately, the present activity data base includes very few such multi-component activities (only 49), and because they include twelve different types of activities, the number of cases for which a given quality indicator is present is too small to allow useful analyses.

An alternative way to compare activities involving a structured planning approach with other activities is to use as a proxy for planning one item that is available in the activity questionnaire for every type of activity. This item asked whether or not one of the elements of planning – formal needs assessment – was used to select the program or practice for the school. As noted above, formal needs assessment is present in 71% of the school planning activities. Mean scores on measures of program quality for programs or activities selected in part on the basis of a formal needs assessment and for activities selected without a formal needs assessment are displayed in Table 5.8. The table shows that the proportion of best practices with respect to methods used is higher ( $M = .59$ ) for activities selected following formal needs assessment than for activities selected without a needs assessment ( $M = .51$ ). Of the ten indicators of quality, all except the ratio of providers to students in the school favored programs selected using needs assessment; and the differences were significantly different from zero in six of the ten comparisons. Activities selected using a formal needs assessment are used more regularly by staff, incorporate more methods and content “best practices,” involve more lessons, are operated more frequently, and last longer than other programs. A greater percentage of programs based on a formal needs assessment (62%) are judged adequate according to the criteria described earlier than are programs without a needs assessment (54%). Activities selected on the basis of a formal needs assessment are clearly of higher quality than activities selected in other ways.

Activities that are initiated and maintained through a deliberate planning effort are of higher quality than programs that are simply “installed” in the organization. These well-planned activities tend to have some of the characteristics shown earlier to be related to higher quality programming: A high level of local staff participation in program initiation; more and better training; greater standardization; and a higher degree of supervision. Interestingly, these activities tend to be funded through government sources – Safe and Drug-Free Schools funds and, to an even greater extent, other government funding. Ancillary analyses (not tabled) imply that activities initiated through a deliberate planning effort are more likely to have been developed by a researcher, and they tend *not* to be “packaged” programs such as D.A.R.E. or QUEST.

Table 5.8  
*Activity Quality by Use of Needs Assessment*

Quality indicator	Formal needs assessment used					
	No			Yes		
	<i>M</i>	CI	<i>n</i>	<i>M</i>	CI	<i>n</i>
<b>Technical quality</b>						
Proportion “best practices” used – methods	.51*	.49 - .54	998	.59	.56 - .61	698
Proportion “best practices” used – content	.68*	.65 - .72	574	.74	.70 - .77	382
<b>Intensity</b>						
Number of lessons/sessions	32.16	24.27 - 40.06	882	34.59	28.67 - 40.51	570
Number of lessons/sessions (natural log)	2.55*	2.43 - 2.67	882	2.82	2.69 - 2.95	570
Duration	5.14*	5.01 - 5.27	1105	5.61	5.48 - 5.74	753
Frequency of participation – students	2.96	2.84 - 3.08	1566	3.15	3.01 - 3.28	1050
<b>Extent of use</b>						
Frequency of operation	2.61*	2.55 - 2.67	982	2.73	2.67 - 2.80	678
Frequency of participation – staff	2.80	2.54 - 3.05	388	3.04	2.78 - 3.30	315
Level of use by school personnel	4.05*	3.97 - 4.14	1902	4.35	4.27 - 4.43	1255
<b>Degree of student exposure</b>						
Proportion of students exposed or participating	.38	.35 - .41	1338	.42	.38 - .46	855
Ratio of providers to students in school	.04	.03 - .04	1467	.03	.03 - .04	925
Mean proportion dimensions judged adequate	.54*	.52 - .56	1937	.62	.60 - .64	1277

*Note.* CI = 95% confidence interval for the mean. *n* = unweighted number of activities.

\*95% confidence interval for the difference between the means does not include zero.

## Summary

Evidence presented in this chapter about the activity-level correlates of the quality of those activities supported some of the hypotheses about predictors of quality. Specifically, the following were found to be correlated with activity quality: implementer conscientiousness and a record of past accomplishments, better integration of the activity into normal school operations, greater organizational support for implementation, greater standardization of program materials and methods. Exploration of the data also found that activities that were funded by the local school district's budget were implemented on average with more intensity, greater frequency, and a higher level of use by school personnel; and that activities with a broader range of objectives scored higher on measures of quantity and quality.

Programs that are identified by principals as belonging to more than one category in the classification of discretionary prevention activities tend to be of somewhat lower average quality than programs falling in only one category.

Packaged programs in general tend to be implemented in weaker form than home-grown or locally developed programs. Of the two specific packaged programs examined in greater detail – D.A.R.E. (an instructional/curricular program) and peer mediation (programs involving youths in the regulation of student conduct) – one (D.A.R.E.) was usually a weaker on measures of program quality than other programs in the same category and the other (peer mediation) was usually stronger on measures of program quality than other programs in the same category. Both were, nevertheless, judged “adequate” more often than the average program in their categories.

Several lines of evidence suggest that the involvement of school personnel in planning is important. First, more extensive local planning and involvement in decisions about what to implement is associated with program quality. Second, the typical quality of programs involving planning for or managing change is higher than the quality of most other kinds of programs. Third, programs or activities selected based in part on a formal needs assessment are of higher quality in multiple ways than are activities not based on such an assessment.

The following chapter turns to the school-level correlates of quality and to the quality of prevention programming at the school level.