

A focused approach to assessing prevention program fidelity

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Running head: A focused approach to assessing fidelity

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UNDER REVIEW AT
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Abstract

The primary goals of the present study were 1) to explore the types and frequencies of adaptation reported by facilitators; 2) to document their reasons for making those adaptations; and 3) to propose an efficient approach to the study of prevention program fidelity based on interview data. We interviewed 42 program facilitators involved in a large-scale dissemination about their implementation of a community-based prevention program. Interview questions addressed facilitators' attitudes about program fidelity and the various types of changes, deletions, and additions they made. Although nearly all facilitators reported that fidelity to program curriculum was important, most also reported adapting the program. The most frequent reason facilitators gave for adaptation was deleting or changing material because they ran out of time. We employed a method used in business and health care settings (the Pareto principle, or the "law of the vital few") to identify the minority (30%) of types of adaptation that accounted for a majority (70%) of all adaptations reported. Similarly, we identified the minority of reasons (25%) for adaptation that accounted for a majority (75%) of reasons reported. This approach helps to focus the assessment of fidelity on those adaptations that occur with high frequency, since low-frequency events are unlikely to have a significant impact on large-scale outcomes. High-frequency adaptations can then be targeted to determine their effect on outcomes; to address in training; and to assess on an ongoing basis for continuous quality improvement.

The goal of the present paper is to present a focused approach to the study of program fidelity in community-based programs. First, we present details of interviews with facilitators of an evidence-based program with a statewide dissemination. The program (Strengthening Families Program for Parents and Youth 10-14) is standardized through use of videos and manuals with scripted activities. Interviews were designed to explore the range of adaptations made by facilitators when conducting the program, as well as their reasons for making them. Second, we examine the frequencies of those adaptations and reasons for making them. Finally, we explore the utility of an approach used in healthcare and business to focus on high-frequency events for continuous quality improvement.

Studying Fidelity

The term “intervention fidelity” refers to the match between an intervention as it was intended to be delivered and the intervention as it is actually delivered in real-world circumstances (Chen, 1990; Heflinger, 1996; Mowbray, Holter, Teague & Bybee, 2003). Fidelity is a broad term and may encompass aspects of programming other than content or mode of delivery. The content of most evidence-based programs is developed using explicit theory that has been tested and refined over the course of multiple studies, and the theory underlying program content links program implementation to program outcomes – that is, developers include specific content because they believe it will result in specific outcomes. Thus, deviations from fidelity to program content may have unintended effects on outcomes.

Structural or service-delivery aspects of the program may also be important, and even when a theory of program structure is not specified, it is often implicit (Chen, 1990). Replicated, randomized, clinical trials (RCTs) are able to restrict variation in contextual variables (e.g.

program location, facilitator education, or group size). In real-world implementation, the implicit theory underlying these structural details may be violated. For example, a developer may create a program intended to be delivered over ten sessions. Program attendees, however, may come to fewer sessions and thus do not receive the intended “dosage” of program content, which may diminish program effectiveness. Similarly, there are theoretical and empirical reasons to believe that group size, for example, may be an important determinant of participant learning and behavior change (Marsden & Mathayalakan, 1999); effects on program outcomes of variability in this and many other contextual variables remain unexplored.

Finally, a program may be delivered to populations other than those intended, which may in turn have multiple effects on program fidelity. If a program intended for young children is presented to older children, the link between program content (developed for a particular developmental stage) and program effectiveness is likely to be affected. Program facilitators may also adapt content more, sometimes out of necessity, when their program population is very different from the intended population: language and family structure, for example, may force adaptation of content or structure or both.

The degree to which outcomes are affected by deviations from fidelity is a significant concern in the translation of prevention programs from research-based efficacy trials to community-based implementation (Dusenbury, Brannigan, Falco & Hansen, 2003; Greenberg, Domitrovich & Bumbarger, 2001; Kaftarian, Robinson, Compton, Davis, & Volkow, 2004). Increasingly granting agencies at state and federal levels are requiring that programs chosen for funding be designated as “model” or “best practice” programs, whose efficacy has been demonstrated through RCTs. These designations reflect a determination that program activities are causally related to desired outcomes. However, research-driven trials are more highly

controlled than community-based programs. When programs move into their intended destination, the “real world”, substantial adaptation to program materials may occur. Thus, an important reason to study fidelity is to determine whether specific adaptations are associated with program impact (Botvin & Griffin, 2005). A second reason is to improve implementation on a continuous basis (Limber, 2006).

Program fidelity is difficult to assess on an ongoing basis, especially in multisite programs disseminated across large areas, and especially when the programs are community-driven (Ogden, Forgatch, Askeland, Patterson, & Bullock, 2005). One barrier to effective assessment of fidelity is that the universe of potential deviations from fidelity to structure and content is large, and we do not know 1) how many of these deviations occur on a regular basis; and 2) which are most important in terms of outcome. Thus, it is difficult to know what to assess. There are also practical difficulties in large-scale assessment of fidelity, especially without a targeted focus on potentially influential deviations (Limber, 2006). One method might be to require facilitators to complete implementation surveys after each instance of a program. However, some research has shown that self ratings of fidelity may not be as reliable as observer ratings and that observer ratings are more closely associated with program outcomes (Lillehoj, Griffin, & Spoth, 2004; Spoth, Guyll, & Goldberg-Lillehoj, 2002). This suggests that observation would be a preferable method of assessment, but large-scale observation is not feasible on an ongoing basis. A more reliable and efficient method of ongoing assessment of fidelity, though, is necessary to provide feedback for continuous quality improvement to all program implementers.

Understanding Adaptation

Systematic data describing why facilitators change programs are lacking. There are a number of studies on adaptation for cultural reasons (Castro, Barrera, & Martinez, 2004; Kumpfer, Alvarado, Smith & Bellamy, 2002), and facilitator attributes may also be associated with adaptation (Machin & Fogarty, 2003; St. Pierre & Kaltreider, 2004). Some researchers have explored attributes of teachers who adapt school-based prevention programs (Ringwalt, Ennis, Vincus, & Simons-Rudolph, 2004; Rohrbach, Graham, & Hansen, 1993), but it is likely that community-based facilitators comprise a more heterogeneous group, and the context in which they deliver programs is also different from that of classroom-based programs (Castro, Barrera, & Martinez, 2004). Ringwalt and colleagues conducted a survey of 1905 public school teachers of substance abuse curricula and found that beliefs about program effectiveness and organizational support were among predictors of fidelity in adaptation (Ringwalt et al., 2003), and that group attributes (e.g. students' special needs) predicted adaptation (Ringwalt et al., 2004). However, there is a dearth of research asking facilitators to describe the range of adaptations they implement and their reasons for making them. This knowledge is important because it can inform approaches to preventing or minimizing adaptations during training, technical assistance, or quality assessment.

Focusing the Study of Fidelity: The Pareto Principle

The Pareto principle, also known as the "law of the vital few", is based on the observation that most effects are determined by a small number of causes. The principle originated in the study of political economics in the middle of the last century, when Italian economist Vilfredo Pareto noted that 80% of the nation's income was distributed to 20% of the population. Since that time, the principle has been applied extensively to problems in the academic fields of economics and engineering (c.f. Shoham, 1999), to industry and business

management (Juran, 1954), to stock investment and everyday life (Koch, 1999), and across multiple fields as a quality improvement tool (Gryna, Chua, & DeFeo, 2005). For example, the Institute for Healthcare Improvement used data from hospitals nationwide to determine that changing 6 basic hospital practices would prevent 100,000 iatrogenic deaths annually (Berwick, 1995). If the Pareto principle holds true in the implementation of prevention programs, we would expect to find that a few types of adaptation, out of many possible types, account for a majority of all adaptations that occur. Similarly, only a few reasons for adaptation, out of many possible reasons, would account for most of why facilitators deviate from strict adherence to a standardized program. This information would be helpful in several ways. First, it would narrow the need to assess effects of adaptation on program outcomes, since very low-frequency events are unlikely to have a significant effect on large-scale program outcomes. Second, it would enable program developers to focus on preventing those few types by addressing the “vital” few reasons why they occur. Third, it would allow for more efficient efforts to conduct ongoing assessment of fidelity for purposes of quality improvement.

In order to examine whether this is a feasible approach, two steps are necessary: first, the range of potential adaptations, or types of adaptations, must be defined. Second, the frequencies of those adaptations must be explored. Ultimately it will be important to determine general trends that cut across individual prevention programs and types of programs -- in other words, to determine whether certain generic types of adaptation occur more frequently in implementation of school-based and family-based programs. As a first step in this direction, however, the present study explores these questions in the context of a statewide dissemination of a single evidence-based program.

Background of the Present Study

In 2000, Extension faculty from Washington State University began a coordinated dissemination of a well-known substance abuse prevention program, the Strengthening Families Program for Parents and Youth 10-14 (SFP) (Kumpfer, Molgaard, and Spoth, 1996). SFP is a universal substance abuse prevention program that has been demonstrated efficacious in numerous studies (Foxcroft, Ireland, Lister-Sharp, Lowe & Breen, 2003; Spoth, Redmond, & Shin, 2001). The program is delivered one evening a week for seven weeks. During the first hour of each session, children and parents receive skills training separately. During the second hour, they come together to participate in family skills training. Parent, child and family risk factors are addressed through interactive exercises. The material is covered through activities, lectures, videos, discussions, and role-plays, and homework is assigned at the end of each session (Molgaard, Kumpfer, & Fleming, n.d.).

Extension faculty trained by the program developer regularly conduct standardized trainings for program facilitators and coordinate local series of implementations throughout the state; most of these facilitators conduct an outcome evaluation and submit implementation reports. The present study was designed as an initial attempt to focus our efforts to create an efficient and practical ongoing fidelity assessment to provide feedback to program implementers.

Study Questions and Hypotheses

We conducted interviews of facilitators statewide, asking what types of adaptations they made on a regular basis: Do they add material to the standardized curriculum, delete program components, or change program content? Which components were they most likely to adapt? Second, what are the reasons for the adaptations they make: Do they most often adapt because they disagree with program content, because they feel their personal expertise has something to add to the program, or because of specific attributes of their clientele? And third, are some

facilitators more likely to adapt program material than others? For example, are more experienced facilitators less likely to adapt? Do age and education play a role in willingness to adapt? Do attitudes about program fidelity and beliefs about the program relate to reported adaptation practices?

We hypothesized that a minority of types of adaptation would account for a majority of adaptations reported. Similarly, we hypothesized that a minority of types of reasons for adaptation would account for a majority of reasons reported. It should be emphasized that because the study examines facilitator adaptations of a single program, the types of adaptation likely do not represent the full range of possible adaptations to evidence-based programs. However, we believe that the approach we use to assess fidelity can easily be applied to any community-based prevention program.

Method

Sample

Interview sample. From fall of 2000 through summer 2004, WSU Extension faculty trained 301 SFP facilitators, of whom 65 had implemented SFP at least one time by spring 2005. We were able to contact 52 of the 65 facilitators through email or telephone, 51 of whom indicated willingness to participate in the study. Forty-one (80%) of the 51 returned consent forms and completed the interview process.

Facilitator occupations included parent volunteers (n = 3); school teachers, school personnel and administrators (n = 13); non-school counselors (n = 5); justice system personnel (n = 1); representatives from state and local social service agencies (n = 11); and those who identified themselves as prevention specialists (n = 8). A majority of providers were female (n = 30; 73.2%). Facilitator ethnicity was mainly European American (n = 31; 75.6%), with

facilitators of Latino descent being the second most common ethnicity ($n = 5$; 12.2%). Average age of facilitators in the study was 48.5 years.

Facilitators reported high levels of experience with interactive teaching methods (mean of 5.6 on a scale of 1 to 7, with 1 representing “Absolutely no previous experience” and 7 representing “A lot of previous experience”). Also, many facilitators had implemented SFP several times, and many had implemented a variety of other evidence-based programs as well.

Measures

Facilitator interview. The interview developed for the study consisted of questions in six categories: 1) demographic and employment information; 2) training and preparation to facilitate SFP; 3) experience with SFP and other prevention programs; 4) beliefs about program quality and effectiveness; 5) beliefs about program fidelity and adaptation; and 6) self-reported implementation practices. Several interview questions regarding experience with SFP, experience with other prevention programs, and effectiveness of the curriculum were adapted from Ringwalt and colleagues (2004): “How prepared did you feel to implement the program after going through training?”, “How effective did you think SFP is overall?”, “Do you feel that the program content is an effective curriculum in delivering the program’s message?”, “When were you trained?”, “How comfortable do you feel with the way you have to teach when implementing SFP?”, and “How much do you enjoy delivering the program?”. The remaining items were developed for the current study. Closed questions assessing beliefs about fidelity were rated on seven-point Likert-type scales, and included the following: “How acceptable do you think it is to add material that the written program did not address?”, “How acceptable do you think it is to leave specific material in the written program out?”, “How acceptable do you think it is to change material in the written program?” Open-ended questions were designed to

elicit information about actual implementation practices (e.g. “Can you give some examples of instances in which you added things to the program?”) and reasons for adaptations (e.g. “Was there a particular reason for your additions?”). Questions about implementation practices were prefaced with an introduction intended to minimize social desirability bias, e.g. “We’ve found that many facilitators change things in an effort to better serve their participants. What differences are there between the program as written and the way you deliver it?”

Coding of Qualitative Responses from Interviews

We used a grounded theory analytical approach to code the interview data (Glaser, 1992; Glaser & Strauss, 1967). Grounded theory analysis is an iterative process in which interview data are examined to identify emergent themes or categories. Those themes are then compared to the data, and in this process finer-grained themes or categories may emerge, which are then used to re-examine the data, and so on until a comprehensive theory (coding scheme) has been developed. Using this process, we identified 13 categories of *types* of adaptation (additions, changes, or deletions) (see Table 1) and 15 categories of *reasons* for adaptation (see Table 2). We specified characteristics of each category and determined that the categories were mutually exclusive and exhaustive. A postgraduate project coordinator and graduate research assistant then coded all transcripts, and we computed kappa coefficients to determine interrater reliability for types of adaptations and reasons for them, separately for additions, changes, and deletions. Kappas ranged from 0.86 (reasons for deleting material) to 0.92 (reasons for changes) and averaged 0.89. For each of the 13 types and 15 reasons, reported changes and reasons were assigned either a “1” (for presence, if they reported the type or reason at least once) or “0” (for absence).

Procedure

Facilitators were initially contacted by telephone and email and provided with a description of the interview, its purpose, and its expected length (approximately half an hour). Trained graduate and postgraduate research assistants scheduled interviews with those who indicated willingness to participate and mailed them consent forms and a \$20.00 incentive. Along with the consent forms, facilitators also received a sheet listing the main activities for all seven sessions in order to assist them in recalling details of the program. Participants were asked to return consent forms (pre-addressed, stamped envelopes were provided), and interviews were conducted at the scheduled time upon receipt of consent.

Results

Types of Adaptations

All types of adaptations reported and their frequencies are listed in Table 3. In the text we highlight only those adaptations that were reported by at least four facilitators. In the category of content *changes*, facilitators reported actively changing the program's games most frequently, followed by changes in specific content, random content, and activities. These four types of change accounted for nearly 70% of all reported program changes. Five additional types of change (amount of time, videos, personal information, translation, and miscellaneous changes) were reported three or fewer times. Next, the most frequent types of *additions* to the program were specific content, personal information, and resource information. These three types of addition accounted for 58% of reported additions. Finally, the most frequent *deletions* of program content were games, specific content, random content, and activities, accounting for 93% of all omissions.

In Figure 1, we show the relative frequency of all types of adaptation (combining changes, additions, and deletions) in a Pareto diagram. Changes are depicted in descending

order of magnitude, with frequencies on the left axis and cumulative percentages on the right axis. We see that four of the adaptation types (games, activities, specific content, and random content) accounted for 70% of all adaptations reported, including changes, omissions, and additions.

Reasons for Adaptations

Reasons for adaptations and their frequencies are reported in Table 2. Again, in the text we focus on reasons cited by at least four facilitators. The single most frequently cited reason for additions to program material, accounting for 41% of reasons for adding, was the need to clarify program concepts. The most frequent reasons for deletions of program material, accounting for 75% of reasons for deleting, were lack of time to cover intended content, forgetting material, or disagreeing with content. Finally, the most frequent reasons given for changing content, accounting for 50% of changes, were group attributes, clarification, and lack of time to cover material as intended. The Pareto diagram in Figure 2 demonstrates that four reasons accounted for 67% of all reasons for adapting (changes, omissions, and additions) reported by facilitators.

Facilitator Characteristics and Adaptations

Facilitator beliefs about the acceptability of adaptation were at variance with their self-reported practices. Only 23% thought that deleting material is acceptable, but 88% reported deleting material; 32% reported that changing material is acceptable, and 63% reported changing some aspect of the curriculum. Beliefs about adding material were more congruent with actual reports of adaptation: 56% of facilitators thought that adding material to a standard curriculum is acceptable, and 66% reported adding to the curriculum. Beliefs and reported practices were not significantly correlated (adding: $r = 0.19$; deleting: $r = -0.04$; changing: $r = 0.03$).

Correlations of facilitator characteristics with their ratings of acceptability of adding, deleting, and changing material as well as with their overall number of reported additions, deletions, and changes were low. Facilitators who felt confident about their abilities were significantly more likely to report that adding material is acceptable ($r = 0.31, p < 0.05$); facilitators experienced in delivering prevention programs were less likely to report that deleting material is acceptable ($r = -0.32, p < 0.05$). Facilitators who were confident in their abilities were less likely to report actually changing material ($r = 0.31, p < 0.05$). Other characteristics found to be associated with adaptation in previous studies (Ringwalt et al., 2004) were not significantly correlated with attitudes about adaptation or self-reported practices in the present study.

Discussion

The primary goals of the present study were to explore the types and frequencies of adaptations made by facilitators and their reasons for making them, and to examine the hypothesis that a small number of kinds of adaptation would account for most of the adaptations reported -- i.e., whether the Pareto principle might be applied to the study of program fidelity.

Program facilitators reported a range of different adaptations. Some types of reported adaptations may be specific to the program under study. Others, however, are likely to generalize to other programs. The categories of change reported here could be applied to fidelity studies of other prevention programs to determine how comprehensive and generalizable they are. In addition, and perhaps more importantly, the reasons for adaptation reported by facilitators provide useful information for program developers and trainers. By far the most frequently cited reason for deviations from fidelity was simply that facilitators run out of time. Techniques for minimizing this problem can be emphasized in training and technical assistance

(Dusenbury, Brannigan, Falco, & Lake, 2004; Elliott & Mihalic, 2004). Program developers may also want to account for the fact that community-based implementations often take more time than study implementations, for several reasons: the population is likely to be more heterogeneous than the study sample; pretest and posttest evaluations may take up program time; and local facilitators may be less experienced with program material than researcher-trained facilitators.

Studies of adaptation categories would be particularly useful in the effectiveness trial phase of evidence-based program research. Effectiveness trials, which represent a midpoint between researcher-driven efficacy trials (RCTs) and community-driven implementations, offer the advantage of research access to real-world program contexts. Systematic assessment of adaptations and reasons for adaptation in the community context could provide critical information about high-frequency and high-impact categories of adaptation and about why they occur. This information may influence the final form of a prevention program released for general community use.

No clear message about the relation of facilitator attributes to fidelity emerges from these data. Our findings contrast with those of Ringwalt and colleagues (2004), who found that several of the same attributes assessed in the present study were associated with adaptation of substance abuse curricula by middle school teachers. The discrepancy may reflect the fact that our sample included parent educators, counselors, and prevention specialists, all from outside the school context, for whom prevention program delivery was a core part of their job. These facilitators reported a high level of comfort with interactive teaching and had all attended training for the program, which may have resulted in limited variability. In addition, our sample was smaller than theirs, and thus our power to detect associations was low. However, the study

does demonstrate that almost all facilitators believe fidelity is important and know that they are not supposed to adapt evidence-based programs, and at the same time almost all facilitators do adapt. Many facilitators reported feeling guilty about changing the program but nevertheless felt that they had to, for the various reasons given. This information emphasizes the need to understand why deviations from fidelity occur in order to prevent them; in other words, improving implementation is likely not simply a matter of stressing the importance of fidelity during training.

The hypothesis that a minority of types of adaptation would account for a majority of all adaptations was supported. This finding suggests that studying and managing fidelity in the dissemination of community-based programs would be a more efficient and practicable enterprise with the application of the Pareto principle. Once the range of possible adaptations is determined, those that occur with highest frequency can be targeted for further investigation (to determine why they occur, whether they affect outcomes, and how they might be managed) and for ongoing assessment.(to maintain continuous quality improvement).

The present study has several limitations. First, the sample is small and may not be a representative sampling of facilitators in the state -- for example, facilitators who adapt more radically may have been less likely to participate in the study. Second, the information was self reported so the range and frequency of adaptations may not represent what actually occurs in program implementations. Observational research is necessary to confirm the categories of adaptation and their relative frequency derived from these interview data. Third, the questions used to probe facilitators' adaptations were leading, potentially implying that adaptation represents positive innovation and thus leading to over-reporting of adaptations. Finally, the study cannot answer the primary question underlying fidelity research: Which adaptations have a

significant negative effect on program outcomes? It is possible that some low-frequency adaptations have larger or more deleterious effects than do the high-frequency adaptations identified using the Pareto principle. An important next step is to link the various types of adaptation with their effects on outcomes.

As noted earlier, the study pertains to a single program at multiple sites, and undoubtedly some of the adaptations reported are specific to this program. For example, changing, deleting, and adding games, the most frequently cited adaptation in the present study, would obviously not be possible in programs that do not include games. However, the principle of maximizing efficiency and improving quality through focusing the study of fidelity is applicable regardless of program content. The importance of continual feedback from each step of the prevention cycle is regarded as essential for ensuring program success (Mrazek & Haggerty, 1994). To date, the prevention field has succeeded in creating and utilizing feedback loops between program theory and development, efficacy trials, and replications, but systematic approaches to gathering feedback from “real-life” implementation are limited.

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Table 1. *Definitions and Examples of Codes for Types of Adaptation Reported by Facilitators*

Code Name	Code Definition (Brief)	Code Example
Games	A game has a primary purpose to provide entertainment or amusement. Many games are in the youth session.	<i>"We skipped some of the games"</i>
Activities	An activity is an educational process or procedure intended to stimulate learning through actual experience.	<i>"We didn't do some of the icebreakers"</i>
Videos	Coded if facilitator mentioned leaving out/adding/or substituting something for the video.	<i>"I stopped using the video"</i>
Time	Coded if facilitator mentioned adding or subtracting time for reasons other than those that fell into other coding categories.	<i>"We cut some time at dinner"</i>
Group Process	Coded if facilitator changed the method of delivering the program or matched the delivery of the program to participants in some way.	<i>"We needed to address the needs of those in high need"</i>
Specific Content	Coded if facilitator mentioned or implied that a specific piece of program was left out/modified/or added to.	<i>"We unintentionally let the creed slide"</i>
Random Content	Coded if facilitator mentioned or implied that a piece of program was left out/modified/added to, but did not clarify what piece.	<i>"Sometimes there are parent things we need to leave out"</i>
Personality/Personal Expertise	Facilitator mentioned that their personality or personal expertise in a given area comes into play.	<i>"...with our own personality coming out that we might inject into it"</i>
Resource/Additional Information	Facilitator said that they provided information of resources in their area; created handouts or diagrams to given additional information.	<i>"We also hand out flyers of local resources"</i>
Translation	Facilitator mentioned that translation was an issue; translation of words was something that needed to be done	<i>"[changes]had to do with translating from English to Spanish language..."</i>
Another Session	Facilitator decided to add an additional session for some reason.	<i>"We added an extra session so that people could get acquainted"</i>
Rewards/Prizes/Celebrations	Facilitators includes rewards, prizes, or a celebration into the program.	<i>"...every night a family came they would get a raffle ticket..."</i>
Other	Facilitator mentioned something that does not fit in one of the above coding categories.	<i>"...let audience know who we are, our backgrounds, etc..."</i>

Table 2. *Definitions and Examples of Codes for Reasons for Adaptation Reported by Facilitators*

Code Name	Code Definition (Brief)	Code Example
Time	Changed/added/deleted because there wasn't enough time	<i>"...didn't happen because of time"</i>
Disagreement w/Content	Facilitator stated/implied disagreement with content	<i>"...some of them were just a waste of time."</i>
GroupProcess/ Dynamics/Attempt not to Overwhelm	Facilitator indicated aspects of the process as reason for change; Facilitator described why they changed method to better fit program participants.	<i>"I think you need to pull the audience in..." "...I needed to be flexible"</i>
Group Attribute	Facilitator indicated an attribute of the group as a reason for change.	<i>"We had a kid come out of juvi and put back in during...the program"</i>
Forgetting/ Lack of Organization	Facilitator changed/added/took out something because of poor organization/lack of organization/or s/he forgot.	<i>"...lack of organization." "...and totally forgot."</i>
Clarification/Emphasis	Facilitator modified something because s/he felt needed clarification/emphasis/additional information.	<i>"There are some personal experiences that I find extremely fascinating and helpful..."</i>
Matching to Other Group	Facilitator modified something to match to the other group that is meeting during the same time.	<i>"...because the youth get done first"</i>
Adjusted in Some Way	Facilitator substituted/changed something because felt something else would work just as well.	<i>"...because it was not as important as something else."</i>
Technical Difficulties	Facilitator indicated technical difficulties.	<i>"...because of technical difficulties."</i>
Translation/Language Problems	Facilitator changed something because of translation or language problems.	<i>"...materials weren't translated well..."</i>
Participant's Suggestion	Facilitator substituted/added/changed something because a participant provides an alternative suggestion.	<i>"...when we used a game that the kids suggested..."</i>
Safety	Facilitator modifies to ensure safety of participants.	<i>"...change it for safety [reasons]..."</i>
Increase Familiarity/ Comfortableness	Facilitator changed/modified/added something in order to make participants feel more comfortable or material more familiar.	<i>"...to have people become comfortable."</i>
Review	Facilitator cites review material as the reason for adaptation	<i>"...to review what was learned..."</i>

Table 3. *Frequencies Of Types And Reasons For Additions, Deletions, And Changes*

Type of Adaptation	Add n (%)	Delete n (%)	Change n (%)	Overall
Games	1 (3%)	18 (40%)	9 (27%)	28 (25%)
Activities	2 (6%)	7 (16%)	4 (12%)	13 (12%)
Videos	0 (0%)	3 (7%)	2 (6%)	5 (4%)
Time	3 (8%)	0 (0%)	3 (9%)	6 (5%)
Group Process	2 (6%)	0 (0%)	0 (0%)	2 (2%)
Specific Content	8 (22%)	7 (16%)	5 (15%)	20 (18%)
Random Content	3 (8%)	10 (22%)	4 (12%)	17 (15%)
Personal	7 (19%)	0 (0%)	2 (2%)	9 (8%)
Resource Information	6 (17%)	0 (0%)	0 (0%)	6 (5%)
Translation	0 (0%)	0 (0%)	2 (2%)	2 (2%)
Session	1 (3%)	0 (0%)	0 (0%)	1 (1%)
Rewards	2 (8%)	0 (0%)	0 (0%)	2 (2%)
Other	1 (3%)	0 (0%)	1 (3%)	2 (2%)
TOTAL	36 (32%)	45 (40%)	33 (28%)	113
Reason for Adaptation				
Run out of Time	0 (0%)	14 (44%)	4 (14%)	18 (23%)
Disagree with content	2 (9%)	5 (16%)	1 (4%)	8 (10%)
Group Process	0 (0%)	0 (0%)	3 (11%)	3 (4%)
Group Attribute	3 (14%)	3 (9%)	5 (18%)	11 (14%)
Forgot	0 (0%)	5 (16%)	0 (0%)	5 (6%)
Clarify	9 (41%)	0 (0%)	5 (18%)	14 (18%)
Match to other session	2 (9%)	1 (3%)	1 (4%)	4 (5%)
Adjust	1 (5%)	2 (6%)	2 (7%)	5 (6%)
Technical	0 (0%)	1 (3%)	0 (0%)	1 (1%)
Translation	0 (0%)	1 (3%)	2 (7%)	3 (4%)
Suggestion	0 (0%)	0 (0%)	1 (4%)	1 (1%)
Safety	0 (0%)	0 (0%)	1 (4%)	1 (1%)
Familiarity	1 (5%)	0 (0%)	0 (0%)	1 (1%)
Review	1 (5%)	0 (0%)	0 (0%)	1 (1%)
Other	3 (14%)	0 (0%)	0 (0%)	3 (4%)
TOTAL	22 (28%)	32 (40%)	25 (32%)	79

Figure Captions

Figure 1. Pareto diagram showing reported frequencies of each type of program adaptation (left axis). Markers on the curved line indicate cumulative percentages (right axis). The dotted line indicates the cumulative frequency (approximately 70%) of the four most frequent types of adaptation.

Figure 2. Pareto diagram showing reported frequencies of each reason given for program adaptation (left axis). Markers on the curved line indicate cumulative percentages (right axis). The dotted line indicates the cumulative frequency (approximately 70%) of the four most frequent types of adaptation.

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