Developing strategies for child maltreatment prevention

A guide for Adapting Evidence-Based Programs

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Overview

The previous two guides in this series looked at how to conduct a community needs assessment[1] and how to develop an intervention strategy and select evidence-based programs (EBPs) to address community needs[2]. Ideally, the interventions selected are ones that best fit the local needs and conditions of the community, which will reduce the likelihood that significant adaptations will need to be made. However, there still may be a need to make adaptations to EBPS, for a variety of reasons. This final document provides guidance to administrators and program directors on how to decide whether adaptations should be made, and if so, how best to make them.

It is important to consider that adaptations will likely have implications on program results, and that those can be undesired or unintended outcomes. While it may seem that adapting a program is easier than implementing a program with fidelity, it is often not the case. Not only does adapting an intervention require a thorough understanding of the program theory and core components, but it may also require additional resources to monitor the adaptation and evaluate the outcomes. (NREPP, 2012)

Outline

In this guide, we will discuss the following things:

1. Implementation and adaptation
2. Debate: are adaptations good or bad?
3. Categorizing different types of adaptations
    a. Valence
    b. Timing
    c. Fit
    d. Box: More on Cultural Adaptations
4. How to plan ahead for adaptation
    a. Examples of planned adaptation frameworks
5. Importance of documenting, monitoring, and evaluation
6. Examples from the field

Introduction on Implementation and Adaptation

EBPs are interventions which have been shown by research to be effective in reaching certain outcomes; often in the health, behavioral and social science fields, and with the aim to provide benefits to children, individuals, families, and communities. While EBPs are researched in controlled environments, they are intended to be used by organizations in the real world. To achieve the same desirable outcomes in practice settings, EBPs must be implemented well (Fixsen, 2005).

Implementation is a set of specific activities designed to put a program into practice (NIRN, 2015). For example, program developers might specify the educational materials, length of training sessions, program delivery method, and other procedures which must be followed to ensure an EBP is implemented as prescribed, or with fidelity. "Fidelity refers to delivering a program in the same way in which it was delivered during efficacy and effectiveness trials" (Stith et al. 2006, pg. 610).

However, in real world settings, it is not always possible to follow a program's implementation process with 100% fidelity. Often practitioners make adaptations in either 1) program content, or 2) the process or mode of delivery. The figure below summarizes program elements that are sometimes adapted.

Adaptation Areas

| Procedure: (time, location, recruitment, delivery, staff) | Dosage: (number and length of lessons or sessions) | Content: (adding or removing lessons) | Participants: (targeting a different population) | Cultural Relevance: (make appropriate for the audience) |
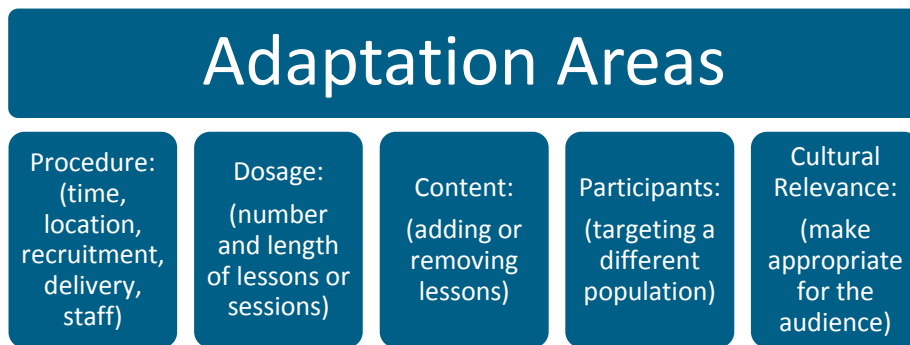
Adapted from Moore et al. (2013)

Purpose of Adaptation

It is important to note that adaptation is a process intended to tailor an existing EBP to meet the unique needs or desires of a specific community, and not to invent a completely new program (Chen et al. 2013). Additionally, adaptation of an EBP to make implementation easier, to eliminate controversial subjects, to stick to what is familiar or fun, or due to a lack of appropriate training or preparation, is unacceptable.

Debate: are adaptations good or bad?

In a large survey of EBP providers in Pennsylvania, 44% of respondents reported making adaptations to program content (Moore et al. 2013). While other studies have also shown that adapting EBPs is common in practice (Carvalho et al. 2013), there has been a debate on whether adaptations have a positive, negative, or neutral impact on outcomes. Some researchers suggest that adaptation is necessary to meet specific local needs, while others argue that adapted programs will be less effective than the originals (Carvalho et al. 2013).

Since fidelity is related to program effectiveness, adaptations that alter fidelity are likely to decrease effectiveness (Stith et al. 2006). For example, adaptations which are cost-cutting measures that dilute the

program intensity will likely result in limited impact (Moore et al 2013). However, some studies indicate that cultural adaptations to prevention programs can have positive impacts. For example, one study found that cultural adaptations greatly improve program acceptability and engagement of ethnic families, which lead to more successful recruitment and retention, without having negative impacts on outcomes (Kumpfer et al. 2002). Other research has also shown that modifications to EBPs usually did not significantly impact program outcomes, and that additions to EBPs that did not detract from fidelity, led to improved outcomes (Berkel et al. 2011).
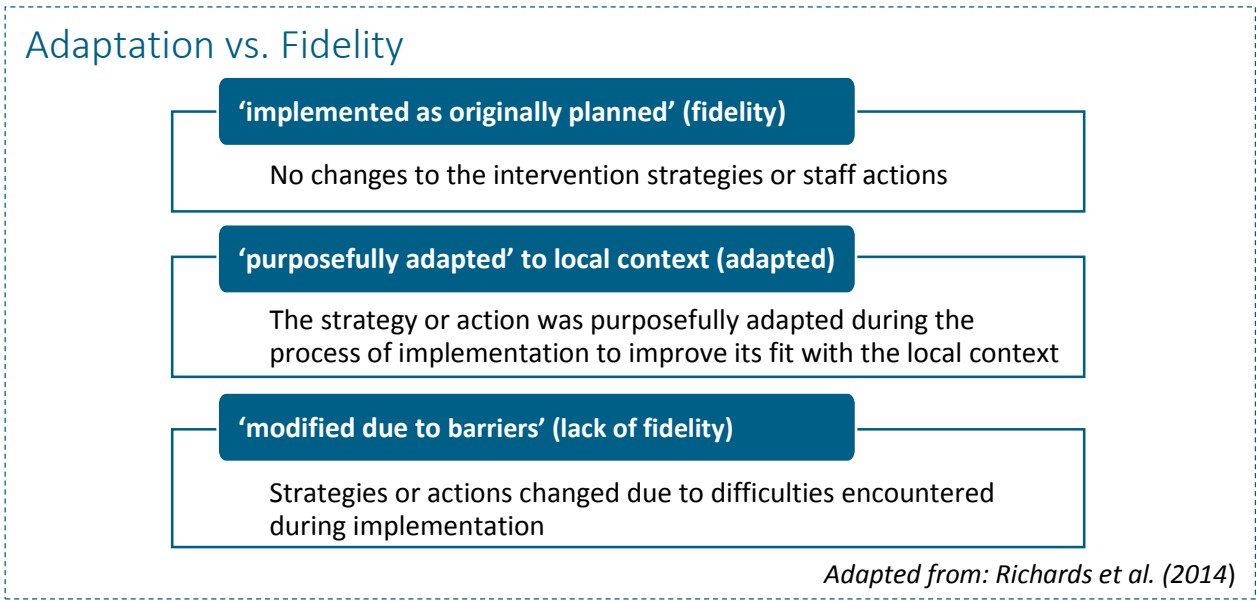
For Adaptation	Against Adaptation
Adaptation can improve: (1) relevance of the program to participants, which could increase attendance and behavior change, (2) ownership of the program by implementing agencies, and (3) fit between the program and the economic, community and political context in which it is being implemented, which can lead to increased sustainability (Lee et al. 2008; Kumpfer et al. 2002; Van Daele et al. 2012, Castro et al. 2004; Berkel et al. 2011).	The National Advisory Mental Health Council's Workgroup (2010) listed disadvantages to making adaptations, including: (1) unnecessary delays in delivery of the intervention; (2) undesired outcomes or decreased benefit to participants if the adaptation is based on a potentially false assumption; and (3) uncertainty resulting from delivery of an untested form of an intervention (Baumann et al. 2015).

This debate on whether adaptations are beneficial to program outcomes stems from the definition of adaptation. Some people define adaptations as a lack of fidelity, while others have argued that it should be defined as additions to the program, that do not detract from fidelity (Berkel et al. 2011). Thus, a new way of thinking about adaptation and fidelity is to break fidelity into "what can be modified (e.g., surface structure modifications that are intended to boost engagement and retention) and what should never be modified (e.g., an innovation's core components)." (Meyers et al. 2012, pg. 468). Thus, if adaptations go against program core components they can be considered as lack of fidelity, but adaptations that don't go against the core components might be beneficial.

Core Elements

Definition: "core elements are the essential program components that are believed to make an evidence-based program effective and that should be kept intact to maintain intervention effectiveness"
(Carvalho et al. 2013, pg. 349).

Adaptation vs. Fidelity

'implemented as originally planned' (fidelity)

No changes to the intervention strategies or staff actions

'purposefully adapted' to local context (adapted)

The strategy or action was purposefully adapted during the process of implementation to improve its fit with the local context

'modified due to barriers' (lack of fidelity)

Strategies or actions changed due to difficulties encountered during implementation

Adapted from: Richards et al. (2014)

Identifying Core Components in Guiding EBP Adaptation

Unfortunately, the core components of an EBP are not always known and extra research by program developers may be needed. The CDC and ETR Associates developed a framework for practitioners adapting sexual health EBPs. The team grouped the core components by: core content, core pedagogy, and core implementation. Different types of adaptations were classified as Green, Yellow, and Red Light adaptations. The definitions of which are listed to the right. To assist practitioners with the adaptation process, the team also included fidelity/adaptation monitoring logs. (Rolleri et al. 2014)

Green Light Adaptations are safe and encouraged changes to program activities to better fit the age, culture, and context of the population served.

Yellow Light Adaptations should be made with caution. Consulting an expert in behavior change theory and curriculum development is highly recommended.

Red Light Adaptations are unsafe and should be avoided since they compromise or eliminate one or more of a program's core components.

Source: ETR Associates and CDC Division of Reproductive Health (2012)

Over the years, the debate has evolved and now the discussion has turned to when and how to make adaptations, rather than if they ever should be done (Berkel et al 2011). Research has shown that the type and method of adaptation is important and not simply whether an adaptation is made. The next two sections will discuss the different types of adaptations and different processes for adaptations that have been developed by researchers.

Categorizing different types of adaptations

Not all adaptations are created equal. There are three main ways to categorize different types of adaptations: valence, timing, and fit. Based on these characteristics, adaptations can be evaluated as to whether they are likely to have a positive, negative, or neutral impact on outcomes.

Valence

Adaptations are typically separated into categories of "minor" and "major", or "surface" and "deep", where major or deep adaptations are those that are likely to alter the core components and underlying logic of a program so significantly that it no longer results in desired outcomes (Carvalho et al. 2013; Chaffin et al., 2004).

Another way to describe the different categories of adaptations is through the term "valence". Valance is defined as "how the adaptation may alter the program's logic model and thus its effectiveness." (Moore et al. 2013 p.151). Adaptations which are aligned with the program goals and theory are considered "positive", while those that deviate or detract from the program goals and theory are considered "negative". Many researchers believe that determining the valence of an adaptation is extremely important in assessing the impact it is likely to have on outcomes (Dusenbury et al. 2005; Berkel et al. 2011)

Timing

In addition to valence, adaptations can be categorized by the timing at which they are planned and executed. According to Moore et al. (2013), a "proactive" adaptation is one that is planned before implementation begins, while "reactive" is one that occurs after implementation begins in response to unexpected obstacles. Researchers warn against the reactive, or spontaneous, adaptation of programs made by frontline staff, since those are more likely to impact the core components of a program (Stith et al. 2006). For example, one study found that most adaptations that were made reactively and as a result of logistical issues, were not aligned with the program's core goals (Moore et al. 2013). Another study found that unintentional adaptations which went against the core components, occurred out of necessity to respond to unanticipated personal situations like work and family responsibilities, and changing schedules (Carvalho et al. 2013).

It is important to also consider the length of time that the EBP has been implemented. One study found that as frontline staff who deliver the program gain more experience and confidence in the EBP over time, they begin to make more adaptations. Facilitators will often maintain program components they believe are successful and drop components that they think fail to engage participants. Facilitators also might begin to adapt programs by supplementing components with their own knowledge from previous experiences (Kerr et al. 1985 in Berkel et al. 2011). Thus, it is a good idea to plan ahead on how this type of adaptation will be addressed; is it something to be prevented, or something to be encouraged, but monitored and evaluated?

Fit

Finally, adaptations can be categorized by the reason for their occurrence. Programs are adapted for a variety of reasons, including those listed in the box on the next page. Usually adaptations occur when there is an issue with fit. Moore et al. (2013) separates fit into two categories: philosophical and logistical.

Adaptations due to mismatch in philosophical fit occur when the practitioner's or organization's beliefs do not align with the conceptual models of the EBP. For example, in a study on parenting EBPs, Lize et al. (2014) found that community-based organizations (CBOs) believed that parenting classes were too general. Thus, they made adaptations to supplement parenting classes with a mutual support system that developed parenting skills such as communication, trust, self-reliance, self-awareness, and meeting concrete basic family needs.

On the other hand, adaptations due to logistical fit occur when there is discrepancy between EBP implementation design and the context in which it is delivered. Logistical adaptions may occur due to a different target population, resources, time, location, facilitator skills, schedules, transportation and accessibility (Moore et al. 2013). For example, Lize et al. (2014) found that one major reason for adaptation was in regards to fit with target population: agencies had the tendency to serve every client, even if the EBP was not designed to meet the needs of clients with complex needs. The study found that the limited resources within the community caused providers to make reactive adaptions to appropriately address the multiple and serious needs of the clients (Lize et al. 2014). Thus, when working with high needs populations, client crises can lead to unplanned reactive adaptations, which could go against the EBP's core components. Agencies should plan in advance how to manage such potential adaptations.

Summary: Reasons for Adaptation of EBPs

- Differences in the target population: e.g., looking for a program suitable for an ethnic group and find a good program that has not previously been used with that group
- Issues with complexity or ease of use: e.g. not enough class time to deliver a classroom-based EBP
- Potential barriers to implementation such as time, money, resources, training, staff turnover
- Reaching target population and addressing participant dissatisfaction with program
- Lack of perceived efficacy, relevance, or acceptance of the program by staff or community
- Lack of understanding of what makes the program work

(NREPP, 2012; Moore et al. 2013)

Cultural Adaptations

What is culture and cultural adaptation?

Castro et al. (2010) state that, ''culture consists of the worldviews and lifeways of a group of people'' (p. 216). Furthermore, there is heterogeneity within racial and ethnic groups in the US, which should not be ignored when determining intervention needs. Thus, "adaptations of interventions should focus on subcultural groups who share common developmental, familial, or life experiences either within or across racial ethnic groups." (Lewin et al. 2015; pg. 143). Finally, cultural adaptations should add culturally appropriate content or methods to an EBP, without disrupting fidelity to the core components.

Should cultural adaptations be made?

EBP adaptations that addresses cultural differences are considered important by many researchers (Castro et al., 2004). Cultural adaptations have been shown to improve the **relevance, acceptability, effectiveness, and sustainability** of interventions for both providers and target populations (Baumann et al. 2015). Cultural adaptations might be needed when practitioners want to use an EBP with populations that differ from those with which the EBP was originally developed and tested. For example, few EBP clinical trials have not included a sufficient number of ethnic minority families to permit generalization of EBPs across cultures (McCabe et al., 2005 in Baumann et al. 2015).

However, some researchers do not believe there is sufficient evidence for the need for culturally-specific adaptations to behavioral parent training programs. For example, two studies cited by Self-Brown et al. (2011) provide "little support that adapted interventions are more effective with diverse families than the original versions." (pg.1170)

How to make cultural adaptations?

If cultural adaptations are deemed appropriate and necessary for your organization, there are many approaches to conducting them, including community-based participatory approaches and matching the cultural backgrounds of facilitators with those of the participants' (Berkel et al. 2011). Another method is the Ecological Validity Model by Bernal, et al. (1995), a brief description of which is given on page 8 of this document.

Cultural adaptations can be made to address any or all of the following characteristics:

(a) *Cognitive-information processing* characteristics such as language and age/developmental level;
(b) *Affective-motivational* characteristics related to gender, ethnicity, religion, socioeconomic status;
(c) *Environmental* characteristics that include ecological aspects of the local community.

(Castro et al. 2004)

Some additional factors to consider when designing culturally-sensitive family interventions include: "family structure, roles and responsibilities, predominant cultural beliefs and values, child raising practices and developmental issues, sexuality and gender roles" (Sanders, 2000). Other factors that might play a role for some ethnic groups include "family migration and relocation history; levels of trauma, loss, and possible posttraumatic stress disorder (PTSD) related to war experiences or relocation; family work and financial stressors; and language preferences and impediments" (Turner, 2000).

See Kumpfer et al. (2002) for case studies on cultural adaptation of the Strengthening Families Program.

How to plan ahead for adaptation

Unplanned adaptations have the potential to go against the core components of EBPs. Thus, a best practice is to think about and plan for adaptations rather than making them spontaneously. Adaptations can be planned either before implementation or after implementation has begun. Pre-implementation activities include: arranging organizational resources, hiring staff, and developing contracts for collaborative partnerships. At this stage, questions and details about potential clients and work processes will be worked out. This planning process will inform whether there is a need for adaptation of an EBP.

During implementation, issues that were not apparent prior to implementation might arise. Some questions to think about when considering making adaptations to a program are listed in the box below.

Questions that might inform whether adaptation is needed:
- Who is showing up for services and how do they find us?
- What are we learning about client needs and abilities as we implement?
  - What services do clients use?
  - Where and at what times do clients want services?
- What are we learning about staffing needs and training?
- What are we learning about program integration within the organization?
- What are we learning about our ability to collaborate with partners?
- What are we learning about funding streams?

(Klawitter, et al. 2014)

If there is a desire to adapt a program during either stage of implementation, there are a variety of frameworks or models for practitioners to use. In general, these models recommend that adaptations be informed by stakeholder expertise, in consultation with program developers or researchers. This is so that core elements can be identified and evaluations of the adaptations be conducted. Some common elements among adaptation models are summarized in the box below. Additionally, a selection of systematic adaptation processes are briefly summarized on pages 8-10, with more listed in the references.

Common elements in the planned adaptation process

1) Identify core program components and activities that impact outcomes
   a. Use program theory and prior evaluations
   b. Consult with EBP developer
2) Identify why adaptations are needed and how to make them without altering the core components
   a. Use input from partners and stakeholders on what is not working and why
   b. Is it possible to change local capacity before altering the program?
   c. It is safer to add to a program than modify or subtract from it
3) Pilot test adaptations
   a. Train staff and set up a new implementation processes
4) Monitor and evaluate adaptations, to ensure that they result in desired outcomes

Finding the Balance [Backer, 2002 also see Castro et al. 2004]

The guidelines listed below stress the importance of balancing program fidelity and adaptation. This approach is based on the program's theory and/or logic model, with the aim of preserving the program's core components, while also allowing for adaptations to improve fit with the local context. These guidelines were developed based on the available literature of the time, and are seen as preliminary. The author suggests they may be further refined to better address other issues which may arise for researchers, program developers, implementers, funders, and policymakers.

1. **Identify and understand the theory base behind the program.** Published literature on the program should provide a description of its theoretical underpinnings; if not, an inquiry to the program developer may yield this information. This may or may not include a logic model that describes in linear fashion how the program works. The theory and logic model are not in themselves core components of a program, but they can help identify what the core components are, and how to measure them.

2. **Locate or conduct a core components analysis of the program.** This will provide implementers with a roster of the main "program ingredients," and at least some sense of which components are essential to likely success and which are more amenable to modification, given local conditions. Ideally, the program developer or a third party will already have conducted the core components analysis.

3. **Assess fidelity/adaptation concerns for the particular implementation site.** This step means determining what adaptations may be necessary, given the target population, community environment, political and funding circumstances, etc. For example, what are the needed resources and available training?

4. **Consult as needed with the program developer to review the above steps and how they have shaped a plan for implementing the program in a particular setting.** This may also include actual technical assistance from the developer or referral to peers who have implemented the program in somewhat similar settings.

5. **Consult with the organization and/or community in which the implementation will take place.** This is a process to allow fears and resistance to surface, build support for the program, and obtain input on how to do the implementation successfully.

6. **Develop an overall implementation plan based on these inputs.** Include a strategy for achieving and measuring fidelity/adaptation balance for the program to be implemented, both at the initial implementation and over time. By addressing all of the complex stages of implementation, such a plan can increase the opportunities for making choices that shape a program, while maintaining good fidelity. Also consider how to document adaptation efforts, include fidelity/adaptation issues into the program evaluation, and conduct an ongoing analysis of fidelity/ adaptation issues.

Ecological Validity Model [Bernal et al. 1995]

The Ecological Validity Model (EVM) informs what cultural adaptation to make in the delivery and content of an intervention. The EVM specifies eight cultural domains, described below. See Matos et al. (2006) for an example of how it is used in practice.

**Culturally Sensitive Elements and the Dimensions of Treatment
for Clinical Research Interventions with Hispanics**

1. Language	Culturally appropriate; culturally syntonic language
2. Persons	Role of ethnic/racial similarities and differences between client and therapist in shaping therapy relationship
3. Metaphors	Symbols and concepts shared with the population; sayings or 'dichos' in treatment
4. Content	Cultural knowledge: values, costumes and traditions; uniqueness of groups (social, economic, historical, political)
5. Concepts	Treatment concepts consonant with culture and context: dependence vs. interdependence vs. independence; emic (within culture, particular) over etic (outside culture, universal)
6. Goals	Transmission of positive and adaptive cultural values; support adaptive values from the culture of origin
7. Methods	Development and/or cultural adaptation of treatment methods. Examples: "modeling" to include culturally consonant traditions (e.g., cuento therapy (therapy based on folk tales)); "cultural reframing" of drug abuse as intergenerational cultural conflicts; use of language (formal/informal); cultural hypothesis testing; use of genograms, "cultural migration dialogue"
8. Context	Consideration of changing contexts in assessment during treatment or intervention: acculturative stress, phase of migration; developmental stage; social supports and relationship to country of origin; economic and social context of intervention

Method for Program Adaptation through Community Engagement (M-PACE) [Chen et al. 2012]

This method of planned adaptation addresses differences between the populations within which an evidence-based intervention was originally tested and the new target population, without taking away from the program's effectiveness. M-PACE uses regular feedback from program participants to guide adaptation. The five steps of M-PACE are described below, along with some examples of how the method was used for an adaptation of the Arthritis Self-Help Program (ASHP).

Step 1: Convene an Adaptation Steering Committee
Researcher and community project leaders recruit 10-12 individuals to serve on a steering committee that will oversee the adaptation process. This committee should consist of researchers, implementers or practitioners, and community members who themselves would benefit from participating in the intervention. It is critical that at least one member of the steering committee be familiar with the theory of change of the evidence-based intervention (EBI).

Step 2: Implement the Unadapted Program to Generate Recommendations for Program Change
Rather than exposing participants to sections of a program, it is important to first implement the entire unadapted program with fidelity. Recruitment differs slightly from normal programs in that all participants must be willing and able to provide informed consent to participate in the research and evaluation component.

Step 3: Systematically Obtain Evaluations of Program Components
Telephone/paper surveys, individual interviews and focus groups can be used to get feedback from participants and facilitators. The surveys assess likes, dislikes, usefulness and other reactions to all topics covered within a given program module and should include closed and open-ended questions. Interviews and focus groups ask open-ended questions to obtain additional suggestions for program modification. Assessments close to the time of exposure increase the chances that participants will accurately recall feelings and reactions to program material.

Step 4: Summarize Stakeholder Feedback
The contents of the surveys and focus groups are compiled by designated members of the steering committee. Quantitative results are given in simple graphs or charts. Open-ended responses are transcribed and a full list of statements is compiled. This list is sorted into categories by theme with a count of mentions for each theme.

Step 5: Adjudicate Program Feedback to Select Program Modifications
The steering committee meets to review all feedback and make choices about how to adapt the EBI, based on criteria such as **importance, feasibility,** and **congruence** with core components. After evaluating each suggestion using these criteria, the steering committee seeks consensus on whether to adapt a specific element of the program. Careful documentation of the rationale behind the adoption or rejection of each suggestion should be made. Removing content should be done with care, as impact to the core components is more likely. If new materials are to be developed for the adapted program (e.g., reproducing all handouts for a low literacy consumer, or providing additional nutrition handout) requires extensive work, several steering committee members might form a subcommittee to perform the tasks. The completed adapted program is then reviewed once more and approved by all steering committee members.

Example: The steering committee had decided that a unanimous vote was needed to adopt a recommended change, and that a modification must simultaneously meet all three criteria to be adopted. Some examples are given below:

Importance: While only two participants recommended distributing information about local exercise classes, this recommendation was deemed to be a potentially important addition to the program (as well as feasible to implement and congruent with program theory) and was accepted by the steering committee.

Feasibility: several participants suggested that classes meet twice a week. However, this recommendation was deemed impractical because sites are often heavily scheduled with other activities, making additional class space unavailable.

Congruence: the adapted program allowed instructors to limit individual sharing to three to five people rather than all participants if sharing was taking too much time. Although individual sharing of the past week's challenges and achievements supports problem solving and strengthens the development of self-efficacy, both important processes in the ASHP (Lorig & Holman, 2003), the steering committee honored the feedback that repetitious or verbose sharing detracted from the class experience. The steering committee did not eliminate individual sharing, but chose a middle path between participant preferences and the original ASHP protocol.

Planned Adaptation [Lee et al. 2008]

Planned Adaptation is a four-step approach which is specifically aimed at practitioners, to guide them in making adaptations that both maintain core components of a program and take into account the needs of particular populations.

Step 1: Examine EBP theory of change
INPUTS: original program theory, found in research literature or in synthesized materials prepared by researchers;
PROCESS: examine the program theory, identifying (1) core mechanisms of change, or causal mechanisms; (2) moderators that may enhance or diminish outcomes; (3) any potential secondary pathways through which change is enacted;
OUTPUTS: key elements of the EBP's program theory are clearly identified.

Step 2: Identify population differences
INPUTS: identify key elements of the EBP's program theory (from Step 1) and differences between the original and new target populations, drawing on practitioner knowledge of the population served and intervention research on the original population;
PROCESS: examine research to (1) verify that core elements of the program theory are applicable to the new population; (2) identify population differences that may act as moderators or impact secondary pathways of change;
OUTPUTS: population differences that may require program adaptation are clearly identified

Step 3: Adapt program content
INPUTS: key elements of the program theory (from Step 1), population differences that may require adaptation (from Step 2), and EBP's implementation plan (from literature or research synthesis);
PROCESS: examine the implementation plan or program content and consider adaptations that may be necessary to meet the needs of new target population, while making sure that core elements of the EBP's program theory are not altered;
OUTPUTS: adapted program implementation

Step 4: Adapt evaluation strategy
INPUTS: key elements of the EBP's program theory (from Step 1) and adapted implementation (from Step 3);
PROCESS: develop a new evaluation plan that reflects the core mechanisms of change within the original program theory, as well as adaptations made in program content to accommodate new target population;
OUTPUTS: adapted program evaluation plan

ADAPT-ITT [Wingood & DiClemente, 2008]

ADAPT-ITT, consisting of eight sequential phases, is a systematic framework for adapting evidence-based interventions (EBIs). While it was initially designed for HIV-related EBIs, the general process is applicable to many other types of EBIs.

The ADAPT-ITT Model: Phases and Methodology

1. Assessment* (Who is the new target population and why is it at risk of HIV?)
Methods: Conduct focus groups/needs assessment with the new target population; Conduct focus group/elicitation interviews with the key stakeholders; Analyze results of formative evaluations

2. Decision (What EBI is going to be selected and is it going to be adopted or adapted?)
Methods: Review interventions defined as EBIs; Decide on the EBI to be selected; Decide on whether to adopt or adapt the EBI

3. Administration* (What in the original EBI needs to be adapted, and how should it be adapted?)
Methods: Administer theater test with members of the new target population; Involve key stakeholders as observers of the theater test; Administer a brief survey with open-ended and close-ended items to elicit participants' and stakeholders' reactions to the theater test; Analyze results of the theater test.

4. Production (How do you produce draft 1 and document adaptations to the EBI?)
Methods: Produce draft 1 of the adapted EBI; Balance priorities while maintaining fidelity to the core elements and underlying theoretic framework of the original EBI; Develop an adaptation plan; Develop quality assurance and process measures

5. Topical experts (Who can help to adapt the EBI?)
Methods: Identify topical experts; Actively involve topical experts in adapting the EBI

6. Integration (What is going to be included in the adapted EBI that is to be piloted?)
Methods: Integrate content from topical experts based on the capacity of the agency, and create draft 2 of the adapted EBI; Integrate scales that assess new intervention content in study survey; Integrate readability testing of draft 2 to create draft 3

7. Training (Who needs to be trained?)
Methods: Train staff to implement draft 3 of the adapted EBI, including recruiters, facilitators, assessment staff, data managers

8. Testing* (Was the adaptation successful, and did it enhance short-term outcomes?)
Methods: Test draft 3 of the adapted EBI as part of a pilot study; Analyze results of the pilot study and use results in phase 2 study; Analyze results of the phase 2 study to determine efficacy

*Target population, key stakeholders, and agency staff are directly involved in these phases of adaptation.

Importance of documentation, monitoring, and evaluation

When planning an adaptation, it is important to note that additional resources will be required to monitor the adaptation and evaluate the outcomes. Adaptations require precise documentation to facilitate future replication by other groups who might be interested in making similar adaptations. Additionally, the adaptation process requires continuous monitoring and evaluation, since it is not known what the impact on program outcomes will be.

Documentation
"We advocate for the explicit description of what has been adapted, why it was adapted, and how it was adapted."   *(Baumann et al. 2015, pg. 118)*

Ideally, all adaptations will be planned in advance, with the goal of meeting client needs and improving outcomes. However, while organizations might hypothesize that an adaptation will have a positive impact, in reality it might have a negative impact on outcomes. A study on parenting EBPs found that all community based organizations that were interviewed thought the adaptations they made were positive, because they were made for the benefit of the families. However, it is possible that some of their adaptations had negative impacts. For example, when facilitators allow individual participant needs to dictate the content of the group rather than the established EBP content the program might be ineffective for some participants (Lize et al 2014). The actual impact of that adaptation would only be known if it is evaluated.

"The more adaptation made to a program, the greater the need for a more rigorous outcome evaluation to test the potential effects of the adapted program." (Carvalho et al. 2013, pg. 355)

How to Evaluate

Adaptations by practitioners in the field provide valuable information to program developers and the prevention community. Findings from practitioner-led adaptations can enhance research efforts in evidence-based practices (Shapiro et al. 2015). However, one caution against adaptation of EBPs by community organizations is that they often lack the resources needed to properly evaluate the effectiveness of adapted treatments (Domenech Rodríguez & Bernal, 2012). Measuring the effectiveness of adaptations requires time, monetary costs, and knowledge of research protocols to collect data. One solution is for agencies to collaborate with program designers, researchers, and field staff who can provide guidance, expertise, and resources to evaluate adaptations.

For agencies who decide to measure the impact of adaptations on their own, there are a variety of methods and tools, each with their pros and cons. The topic of program evaluation deserves its own guide; and there are many evaluation resources available online. For a few examples, see the box below.

Online Evaluation Resources
The CDC's Introduction to Program Evaluation for Public Health Programs: A Self-Study Guide: http://www.cdc.gov/eval/guide/index.htm
The Program Manager's Guide to Evaluation from the Administration for Children & Families: http://www.acf.hhs.gov/sites/default/files/opre/program_managers_guide_to_eval2010.pdf
The Evaluation Toolkit from the Friends National Center on Community Child Abuse Prevention: http://friendsnrc.org/evaluation-toolkit

Examples from the field

Cultural Adaptation of Family Foundations to Strong Foundations
(Lewin et al. 2015)

Summary: Family Foundations, a co-parenting EBP, which was originally designed for cohabitating adult parents, was modified to meet the needs of, and be appropriate for, urban, low-income, minority expectant teen mothers and the fathers of their babies. After the modified program was shown to be both acceptable and feasible in this teen population through a pilot study, it was renamed as ''Strong Foundations.'' Strong Foundations was then embedded within two local ''Teen-Tot'' programs.

Who: The adaptation was developed and conducted through a partnership with practitioners, researchers and the Family Foundations program developer.

How: The adaptation process included four general steps, as described below.

1 Adaptation design based on participant needs, cultural context, and program theory

The adaptation design was based on expertise on the original program from the program developer, as well as additional information gathering from research literature and from experience working in the community. The research team also conducted a small study, including individual interviews and two focus groups with teen fathers and two with teen mothers, to learn about the cultural context and the unique needs and perspectives of the targeted subcultural group. Based on findings, from the research and qualitative study, the team made modifications to the structure and content of the EBP. These modifications were then tested using a both a small pre-pilot test, and then a pilot test that was designed as a randomly controlled trial (RCT).

2 Initial testing of adaptation and ongoing fine tuning

The initial pre-pilot test included videotaped group sessions, and feedback from participants and group facilitators, to determine which activities and topics worked well and which ones needed alteration. The team reviewed all of these elements weekly, so that they could revise program activities, structure, language, and pacing, on an ongoing basis.

3 Further testing of adaptation through an RCT

Once all modifications were finalized, the team conducted a small pilot-test RCT, which required the randomized assignment of teen couples into intervention and control groups. While both groups received the primary care services offered by the clinics, only the intervention group received additional Strong Foundations sessions. During this RCT, the adaptation team tracked program attendance, measured participant satisfaction, and conducted a debriefing with participants. The RCT allowed researchers to gather evidence on whether the intervention group had significantly better outcomes than the control group.

4 Additional evaluation of adapted program

The final step in ensuring that the adapted program is effective is to complete more detailed and larger-scale evaluation studies to look at outcomes more carefully. In research, one study is not enough to conclude that one program is effective. The best evidence of an effective program is when multiple studies which replicate the program show similar positive outcomes. The research team that developed Strong Foundations reports it is looking for funding to do this larger-scale evaluation.

What: Strong Foundations uses the core components of Family Foundations, but the program content and delivery were adapted to be appropriate for teen parents. Some examples of these adaptations include:

- **Adaptation to recruitment process.** Family Foundations participants were recruited through childbirth classes, which were not often attended by teen parents. Thus, Strong Foundations was adapted to recruit participants through organizations which already provide services used by teenagers, such as schools and community health clinics.
- **Adaptation to deliver information and skills in an active, experiential way:** Teen parents were better engaged when adaptations were made to the way information was delivered. Strong Foundations differs from Family Foundations in that it uses role-plays and even a game show format to deliver lessons and allow participants to practice skills. Additionally, teens have negative associations with homework assignments, thus the adapted program replaced homework assignments with take home activities, prizes and gifts to encourage fun ways to practice skills at home.
- **Addition of new elements relevant to teen parents:** Strong Foundations includes additional content specifically tailored for teen parents, such as relationship instability and new partners, the role of grandparents, and infant care.
- **Changes to sessions and program structure.** While Family Foundations is delivered during childbirth education classes prenatally, and in a group format after childbirth, Strong Foundations is delivered through ''Teen-Tot'' programs, which provide medical and psychosocial services to teen parents and their children together in the same primary care setting. In contrast to Family Foundations, the Strong Foundations prenatal sessions are held in the early evening and include a casual dinner. After childbirth, Strong Foundations is delivered through a series of nine individualized sessions integrated into well child pediatric visits. This adaptation is to account for variability in circumstance faced by teen parents and the changing nature of teen relationships during the first year of their child's life.

Adapting PCIT for Puerto Rican Parents (Matos et al. 2006)

Summary: Parent–Child Interaction Therapy (PCIT), a parent-training intervention developed for parents of children with behavioral problems, was adapted for Puerto Rican parents of young children with hyperactivity and other significant behavior problems. Prior to this adaptation, PCIT had mostly been studied with Caucasian English-speaking families from the United States. Thus the PCIT adaptation required incorporation of cultural elements and other modifications to be more suitable and acceptable for Puerto Rican families. Quantitative and qualitative evaluation of the adapted PCIT indicated that it seemed to be an acceptable intervention for this population.

Who: The adaptation was conducted by Puerto Rican researchers, with feedback from practicing clinicians.

How: The adaptation process included the following steps:

1 Translation and Preliminary Adaptation of PCIT Manual

Program materials were translated from English to Spanish by research team members who were native to Puerto Rico, had clinical experience with Latino families and an adequate understanding of the English language. The overall goal of this step was to remain true to the content, procedures, and guidelines of the original English version of the program, but to also adapt it to the sociocultural context of Puerto Rico, using the Ecological Validity Model developed by (Bernal et al., 1995).

2 Initial Exploratory Study of Adaptation

Nine families, including children, mothers, and fathers participated in an exploratory study of the adapted PCIT.

3 Adaptation Revision and Refinement

Further revision and adaptation of the PCIT model was made based on recommendations from parents at the end of treatment, and from regular meetings with therapists regarding the process of applying the adapted PCIT with each family.

4 In-depth Interviews with Parents and Clinical Psychologists

Researchers interviewed 15 parents (9 mothers and 6 fathers) who had completed PCIT and 5 Puerto Rican clinical psychologists who examined the adapted treatment manual. Both groups were asked to examine the structure and content of the adapted PCIT, including parenting skills to be taught, and to identify cultural barriers or values that should be addressed to ensure treatment acceptance and effectiveness with Puerto Rican families. Parents and psychologists believed that most adapted PCIT components did not pose any personal, spiritual, or cultural barriers. The only exception was the use of the time-out room, the acceptability of which was questioned by both a few psychologists and a majority of parents. The main addition to the adapted PCIT suggested by parents and psychologists, was that extended family members, such as siblings and grandparents, be included in the treatment. Parents also requested opportunities to watch videos of other families successfully implementing PCIT and to watch videos of how they themselves interact with their child.

5 Next Step: Randomized Controlled Trial

This pilot study suggests that the adapted PCIT has benefited families are benefiting and led to clinically significant changes. However, the pilot study had several limitations because it was small and did not include a control group. Thus, the authors describe the next stage in the adaptation process is to conduct a randomized trial of the adapted PCIT, to see if the initial encouraging results are replicated at a larger scale.

What: The PCIT adapted for Puerto Rican families uses the same core components of the originally developed PCIT, but includes adaptations that made it more culturally appropriate. The following examples are broken down into initial adaptations and subsequent adaptations, based on participant feedback. All adaptations were considered through the lens of the Ecological Validity Model (EVM), and reading the full report (Matos et al. 2016) is recommended for a complete example of this approach to adaptation.

- Initial adaptations
    - Language: Examples from the original manual were modified to make them relevant to Puerto Rican children (e.g., chimney and snowman were replaced by stove and doll).
    - Psychoeducational module: Researchers developed this module, which consists of two 2-hour sessions, to help parents better understand the nature of their children's behaviors and to establish more realistic expectations of the possible treatment outcomes.
- Examples of subsequent adaptations in response to participant feedback:
    - Additional discussion time: The original PCIT manual proposes 5 minutes for the discussion of contextual issues and stressors that could interfere with family progress, such as transportation and financial difficulties. However, during the exploratory study, families and therapists in Puerto Rico spent about 20 minutes. This longer discussion time not only strengthened the therapeutic relationship but also helped the families stay in treatment. This adaptation aligns with Puerto Rican cultural values of *personalismo* (emphasis on warm relationships with family and friends).

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- o **Metaphors:** Idiomatic expressions that are common in Puerto Rico, were used by clinicians to explain concepts to parents. These included: ''se formó un tiri-jala'' (they got into a dispute, quarrel); ''malascrianzas'' (bad manners); ''trepando paredes'' (climbing walls); ''cantaleteo'' (nagging); ''qué ché-vere'' (terrific/cool).
- o **Inclusion of extended family:** While limited resources prevented the inclusion of extended family members in the adapted PCIT, it was something that was most often requested by participants. This concern reflects the value of *familism* in the Puerto Rican culture. The research team was able to address this concern by adapting PCIT to include dedicated time to discussing how parents could explain the treatment strategies to their family members in order to encourage their support.
- o **Addition of a handout:** A handout about pharmacological treatment for ADHD as added based on parent interest in the topic, though the children were not on medication.
- o **Modified time-out procedures:** While time-out procedures were not completely eliminated, they were modified for children who actively refused and demanded the use of excessive force by parents. Loss of privileges was proposed as an alternate procedure.

Adaptations of EBPs by Practitioners

The following two studies are not ones showcasing a planned adaptation process to an EBP. Instead they are studies which sought to investigate how EBPs are adapted by practitioners in the field. The two studies provide examples of types of adaptations made and lessons learned about those adaptations from EBP developers.

Adaptations of Triple P (Shapiro et al. 2015)

Summary: This qualitative study assessed the type of adaptations made by 69 community-based service providers, to the evidence-based program: Triple P-Positive Parenting Program. The service providers were trained in Triple P, but were not receiving fidelity monitoring or ongoing implementation support from program developers.

Adaptations Made: The study found that community-based service providers were making a variety of adaptations, some of which are listed below. The study also found that providers with increased proficiency and experience in Triple P were able to be more responsive and better tailor the program to parent needs. However, while many of the adaptations might have had neutral or positive effects on outcomes, others could have had negative effects.

- Use of single-topic tip sheets during activities with groups of parents, instead of as handouts to individual parents during brief Triple P interventions
- Combing select materials from Triple P with materials from other programs
- Use of Triple P-specific parenting strategies outside of the program setting, such as application of specific behavior management strategies directly with children in school settings
- Flexible use of program materials, such as showing a Triple P DVD at Parent Teacher Organization meetings
- Improper or no use of assessment or monitoring forms designed to capture client status on relevant outcome domains at the beginning and end of treatment

Lessons Learned: Researchers concluded that adaptations to Triple P materials by experienced practitioners acted as both enablers and barriers to implementation with fidelity. The authors write: "On the positive side, increased [provider] knowledge and confidence can lead to more sensitive and competent implementation with families. On the negative side, increased confidence may result in providers choosing

favored aspects of the program to implement while disregarding other components or by combing program materials in untested ways in work with families" (Shapiro et al. 2015, p. 1623). To address this issue, the authors recommend that Triple P program developers provide ongoing consultation to service providers, to ensure that adaptations are consistent with program core components and theories.

Additionally, service providers, have field experience which can identify adaptations that might have significant positive effects on outcomes for families. By consulting and listening to practitioners, program developers can further research and incorporate some of these adaptations into the program. In the example of Triple P, program developers established topic specific discussion groups as a way of delivering brief Triple P, which were informed by adaptations that were made in the field.

Adaptations of SafeCare (Self-Brown et al. 2011)

Summary: The goal of this study was to learn how community agencies adapt behavioral parent training programs, such as SafeCare, and how to ensure that the adaptations have a positive rather than negative impact on outcomes. Eleven SafeCare providers, from six states, participated.

Adaptations Made: The study found that practitioners used various types of adaptations and engagement techniques, as described below. The study authors suggest that with additional research, some of these adaptations could be incorporated into SafeCare and other parent training interventions, especially those that address concerns related to engagement of families who are usually reluctant to participate in such programs.

- Extra or extended sessions to allow more time for cultural exchanges and rapport building and use of motivational interviewing techniques
- Modifications to session delivery, both in terms of flexible scheduling and the inclusion of extended family members or other caretakers
- Adaptations of materials, such as using more pictures, simpler language and appropriate translations

Lessons Learned: The study authors conclude that the types of adaptations made by practitioners were aligned with the SafeCare core components and did not reduce program fidelity or dosage. Instead, adaptations were made in ways that are complementary to the original EBP and were necessary for best practice.

Conclusion

The purpose of this guide is to provide information to practitioners, so that they may consider the available methods and associated implications of making adaptations to EBPs. While the guide offers many examples, it is important to note that no gold standard strategy for adaption currently exists (Chen et al. 2013). Additionally, while adaptations could be necessary sometimes, there are many instances in which EBPs do not need to be adapted at all, or very minimally. Ultimately, practioners need to consider the needs of the population they serve and thoughfully weigh the potential costs and benefits of adapting EBPs.

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