



Facilitators and Barriers in Cross-Country Transport of Evidence-based Preventive Interventions: a Case Study Using the Family Check-Up

Anne M. Mauricio¹ · Jenna Rudo-Stern¹ · Thomas J. Dishion¹ · Daniel S. Shaw² · Anne M. Gill² · Julie S. Lundgren³ · Jenny Thunberg³ · Närhälsan Center for Progress in Children's Mental Health

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Abstract

This study is a qualitative analysis of facilitators and barriers in the dissemination of Family Check-Up (FCU), a U.S.-developed preventive intervention in Sweden. The FCU is inherently culturally flexible because it was designed to be tailored to each family's needs and context, including cultural norms and values. We present the FCU implementation framework (IF) as a conceptual framework for cross-country transport of the FCU and evidence-based programs (EBP) more generally. The FCU IF draws from implementation science literature and involves specifying barriers and facilitators related to implementation drivers (e.g., competency) at each implementation phase and applying these data to inform phase-specific, readiness-building activities for each driver. In addition to driver-related influences, barriers and facilitators specific to the FCU and the collaborative partnership between the U.S. and Swedish purveyors emerged in the data. The partnership's reliance on a hybrid bottom-up, top-down approach that balanced the Swedish purveyor's autonomy and cultural expertise with guidance from the U.S. purveyor facilitated adaptation of the FCU for Sweden. Relying on previously collected data, we also explored similarities and differences in barriers and facilitators to FCU scale-up in the United States versus Sweden. In general, across drivers, the same barriers and facilitators were salient. This study suggests that dissemination of culturally flexible EBPs guided by a dynamic implementation framework can facilitate cross-country transport of EBPs. This study promotes a culture of prevention by highlighting barriers, facilitators, and readiness-building strategies that influence the cross-cultural transportability of EBPs that prevent the onset and escalation of child problem behavior.

Keywords Cross-country transport of EBPs · Implementation framework · Barriers · Facilitators

There is compelling evidence and increasing international consensus that parenting is critical to child outcomes (Collins et al. 2000). Due to its impact on child outcomes and its malleability, parenting quality is a change mechanism for many preventive

interventions that aim to improve child outcomes (Dishion et al. 2016; Sandler et al. 2011). There is now global dissemination of evidence-based parenting programs (e.g., Forgatch et al. 2013; Molleda et al. 2016; Sanders 2012). Despite cultural, political, and socioeconomic differences, evidence suggests parenting interventions can be transported across countries (Gardner et al. 2016); however, prevention scientists' understanding of factors that influence transportability is limited. This paper addresses this gap by exploring factors that facilitated and impeded dissemination of the U.S. developed Family Check-Up (FCU) when transported to Sweden. Using data collected previously, we also discuss similarities and differences in implementation barriers and facilitators found in the United States and Sweden to identify implementation factors that may be salient across countries. Knowledge about barriers and facilitators when transporting evidence-based preventive interventions across countries can inform readiness-building strategies and the development of implementation frameworks to support dissemination of these interventions. This paper

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✉ Anne M. Mauricio
anne.mauricio@asu.edu

¹ REACH Institute, Department of Psychology, Arizona State University, Tempe, AZ, USA

² Department of Psychology, University of Pittsburgh, Pittsburgh, PA, USA

³ Närhälsan Center for Progress in Children's Mental Health, Gothenburg, Sweden

contributes to prevention scientists' understanding about how to promote a global culture of prevention by elucidating implementation barriers, facilitators, and readiness-building strategies that influence the cross-cultural transportability of preventive interventions.

The Family Check-Up

The FCU is a brief, assessment-driven intervention that reduces child problem behavior by improving parenting quality and maternal depression (Dishion & Stormshak 2007). The FCU was designed for scale-up into large service systems (e.g., community mental health) by: (1) focusing on an intervention process that involves engagement, assessment, and tailoring to fit an array of service systems; (2) using a flexible framework that can link to other evidence-based programs (EBPs); and (3) focusing on more motivation and less on specific delivery of program content. The FCU is grounded in motivational interviewing (Miller & Rollnick 2002) and has three steps: an interview, an assessment with videotaped parent-child interactions, and a feedback session to discuss assessment results and collaboratively identify intervention goals. Goals include evidenced-based and tailored parenting support across three domains: positive behavior support, limit setting and monitoring, and relationship quality (Dishion et al. 2012). The sequence and number of sessions are tailored to a family's needs, strengths, and readiness. The COACH is the FCU's implementation fidelity rating system (Dishion et al. 2010); COACH scores mediate change as a result of the FCU (Smith et al. 2013).

Research Support The FCU has been tested in many randomized control trials (RCT) with diverse families. With young children, the FCU increased positive parenting and decreased maternal depression; both independently led to reductions in child disruptive behavior (Dishion et al. 2008; Gardner et al. 2007; Shaw et al. 2009). The FCU is also linked to increases in children's language development and inhibitory control (Chang et al. 2014; Lunkenheimer et al. 2008) and reductions in children's emotional distress (Connell & Dishion 2008; Shaw et al. 2009). Decreases in disruptive behavior in early childhood were associated with parents' increased satisfaction with family relationships and perceived social support (McEachern et al. 2013).

The FCU was also tested as a selected intervention for middle school students (Dishion & Kavanagh 2003). FCU participation increased parental monitoring, which reduced drug use in adolescence (Dishion et al. 2002, 2003; Connell et al. 2007) and young adulthood (Connell 2009; Nelson et al. 2015). The FCU also improved grades and attendance (Stormshak et al. 2009) and decreased family conflict, which increased parental monitoring and decreased deviant peer

association and antisocial behavior (Van Ryzin & Dishion 2012; Van Ryzin et al. 2012). FCU participation was associated with positive family relationship quality (Van Ryzin & Nowicka 2013); relationship quality predicted less high-risk sexual behavior in adulthood, an effect mediated by parental monitoring and less sexual activity in adolescence (Caruthers et al. 2014).

Implementation Framework and Scale-Up in the United States

Once the FCU's effectiveness was established (Smith et al. 2015), scale-up was initiated. The Arizona State University REACH Institute (REACH), purveyor of the FCU, began dissemination in 2013 using the FCU implementation framework (IF) to support quality implementation. The FCU IF integrates the stage-based Exploration, Preparation, Implementation, and Sustainment framework (EPIS; Aarons et al. 2011) and the determinants-based implementation drivers (ID) framework (NIRN; Fixsen et al. 2009), which outlines phase-specific capacities for implementation readiness. The four EPIS phases are *Exploration*, when a site considers changing services and explores alternatives; *Preparation*, when a site selects an evidence-based program (EBP) and prepares for delivery; *Implementation*, when a site begins to use the EBP; and *Sustainment*, when the site has integrated the EBP into its system and is able to maintain the service. The ID framework posits that three core implementation drivers (i.e., competency, organization, leadership) support sustainable implementation. Competency drivers support workforce development and include provider selection, training, and consultation. Organization drivers support infrastructure and systems to implement an EBP and include facilitative administration (e.g., policies that facilitate implementation), system-level interventions (e.g., between-system collaborations to leverage economic support), and decision support data systems. Leadership includes the technical and adaptive leadership needed to effectively manage change that follows implementation of an innovation.

Consistent with the EPIS and ID frameworks, the FCU IF has exploration, preparation, implementation, and sustainment phases with phase-specific activities that map onto the implementation drivers. The FCU IF incorporates assessment of driver-related barriers and facilitators at each phase to identify driver-related capacities and implementation readiness (see Fig. A1 in online appendix; Dishion & Mauricio 2015; Mauricio et al. 2015). REACH uses these data to adapt implementation strategies to optimize driver-related capacities to implement the FCU. For example, in the preparation phase, REACH assesses provider readiness and uses these data to inform competency drivers. Data are used to (1) identify providers likely to implement with fidelity, (2) individualize training and consultation to accommodate trainee characteristics, and (3) match trainees with FCU consultants. Data-informed

feedback loops are a key feature of the FCU IF and are enabled by a digital system that collects, stores and synthesizes data and has the capacity to monitor interdependencies between implementation process and outcomes.

Family Check-Up Scale-Up in Sweden: Process and Outcomes

Transport of the FCU to Sweden was precipitated by an initiative to shift behavioral health services from usual care to EBPs. For this initiative, a report was prepared for the National Board of Health and Welfare (SBU 2010) to assess the transportability of EBPs developed outside of Sweden based on: (1) evidence-supporting effects, (2) financial costs to implement, (3) relevance or applicability, and (4) ethical concerns about the program's theory or techniques. The FCU implementation in Sweden exemplifies how a community can apply scientific evidence and research on best practices to promote a culture of prevention by shifting from treatment as usual to proactive prevention of child problem behavior using evidence-based practices.

In 2010, the Närhälsan Center for Progress in Children's Mental Health (Center) was established to develop and implement a plan to roll out the FCU in Gothenburg, Sweden's second largest city. The population of the Gothenberg metropolitan area is approximately 1.1 million; 549,000 people live in the city, which has one of the largest growing populations in Sweden. Healthcare is decentralized and management is dispersed at three levels: national, regional, and local (Hjortsberg et al. 2001). The Center is a unit in pediatrics in a public health care facility. The Center develops, implements, evaluates, and offers training in child mental health services. The FCU was a local initiative and integrated into social service agencies and administered by counselors and social workers.

Program materials were translated and adapted to enhance cultural relevance; including norming FCU assessment measures for Sweden. Because the FCU is tailored to individual families' needs and context, flexible application of the FCU to fit Swedish cultural norms and values is consistent with fidelity. Therefore, only surface structure adaptations were made (Resnicow et al. 2000). The Center collaborated with the FCU developer to train and certify Center staff responsible for disseminating the FCU and providers in agencies across seven communities that would be implementing the FCU. The program developer visited Gothenburg twice 2 years apart to conduct training workshops for generation 1 providers, and again 2 years later to train generation 2 providers and to offer booster training and consultation to generation 1. During these years, the program developer also met virtually and in person with Center staff to support their development as FCU trainers and supervisors, which involved co-

assessing the fidelity of FCU sessions by Swedish providers and outlining training and certification protocols for FCU implementation in Sweden. Protocols involve a 5-day training workshop followed by bi-weekly, 3-h group consultations for 1 year, during which providers submit for FCU certification. Consultation involves rating fidelity of videotaped sessions using the COACH (Smith et al. 2013). Certification criteria are 80% attendance rate at consultations and demonstration of fidelity delivering the FCU, as assessed by Center staff with demonstrated reliability on the COACH and certified as supervisors by the program developer. Based on lessons learned with generation 1, for generation 2, the Center staff developed processes to recruit and screen sites as well as providers. The Center initiated peer supervision of their supervision process and continues to collaborate with the U.S. purveyor. Collaboration involves in-person and virtual meetings to iteratively adapt training, consultation, and the FCU implementation model for enhanced feasibility and acceptability and to maintain as much consistency as possible across countries. Collaboration also involves co-sponsoring a bi-annual international conference to unite and support teams implementing the FCU in different countries.

The FCU was delivered in real-world conditions in Sweden and evaluated (Björnsdotter 2014). Families with a 10–13-year-old child who scored above the clinical cutoff on the conduct problems subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman 2001) and who were not receiving other services for the child were eligible for the study; 231 families met criteria and were randomly assigned to FCU ($n = 122$) or iComet ($n = 109$), an online parenting program based on the Parent Management Training Oregon Model (Forgatch & Patterson 2010). Families were clustered ($n = 5$ clusters) based on child baseline risk for problem behaviors and pre-to-post effects were evaluated for each cluster. The FCU had large effects (Cohen's $d > .80$) on child problem behaviors, as assessed by the SDQ total difficulties factor, for clusters with high baseline risk ($n = 3$ clusters) and on the SDQ family warmth subscale for the highest risk cluster. FCU engagement (i.e., completing interview, assessment, and feedback) was high for all clusters (72–90%; Björnsdotter 2014), suggesting acceptability of the FCU.

The FCU continues to be disseminated by social service agencies across Gothenburg and has been piloted in other service settings, such as pediatric primary care. There continues to be uptake, with more than 43 providers across 14 agencies trained and approximately 21% of these providers formally certified. The Center currently maintains responsibility for training, supervising, and certifying FCU providers; however, consistent with a full transfer model, the Center, in collaboration with the U.S. purveyor is developing a train-the-trainer model

(Forgatch et al. 2013). As additional support for quality assurance, sites initiated peer supervision and quarterly conferences to address implementation challenges and motivate providers to maintain certification. The Center and the U.S. purveyor continue to work together to share lessons learned, which inform continuous quality improvement and implementation model adaptation. A goal of this collaboration is to collectively further the global reach of the FCU and to study across-country variations in the intervention model with respect to child and family outcomes.

FCU Scale-Up in the United States: Implementation Barriers and Facilitators

Previously conducted focus groups with early adopting providers informed the FCU IF's development by identifying barriers and facilitators that link to drivers at each implementation phase to specify phase-specific capacity-building activities (Mauricio et al. 2015).

Competency Drivers Consistent with other research (Aarons 2005), selecting theoretically flexible, conscientious, technologically experienced providers with the required clinical skills facilitated implementation. Selecting providers who were “veteran with enough in their toolbox” or via top-down administrative mandates were barriers. Related to training and consultation, time protected to participate in training was a facilitator and no protected time for consultation was a barrier. A long training-to-implementation lag and staff turnover throughout implementation were barriers. Quality consultation that supported FCU fidelity and general clinical competencies was associated with high uptake, as was peer supervision. Other consultation- and certification-related barriers included a mismatch between FCU consultation and typical consultation (e.g., videotaping FCU sessions), no organizational incentives for certification, and providers experiencing certification as judgmental.

Organization and Leadership Drivers Organization barriers included the absence of infrastructure and systems to support implementation. For example, sites did not have data systems to monitor implementation and outcomes to support FCU adherence and sustainability or the technology resources to facilitate uptake. The absence of organizational collaborations with community stakeholders led to consumers' lack of awareness of the FCU and consequent low demand for FCU services. The absence of administrative support for procedural and policy changes to support implementation was also a barrier. For example, there were no changes in expectations about provider productivity, and there were no changes in policies or procedures

to facilitate model usability and integration into the service delivery system. A barrier in the preparation phase was that administrators did not participate in the readiness process and, therefore, committed to using the model without understanding it. The result was a mismatch between the model and the population served by sites. Also, administrators could not adequately communicate with providers about the implementation process and expectations.

Leadership, including effective management and capacities to manage the organizational change that accompanies new practices, is also a key driver of implementation (Fixsen et al. 2009). In our data, a barrier was that leadership did not understand how the model aligned with the agency's practices, population, and service system and was thus unable to promote policy changes to enhance usability and service system integration. Also, because leadership was not engaged, they were unable to respond to barriers (e.g., poor client flow) that emerged.

FCU-Specific Facilitators and Barriers In addition to driver-related barriers and facilitators, EBP-specific factors influence implementation (Green & Aarons 2011). For example, because of the FCU's cultural flexibility, providers could adapt it to meet local needs. However, some providers experienced the preparation and planning needed to deliver the FCU as burdensome, which diminished acceptability and subsequent uptake. In addition, some providers were resistant to the model because elements (e.g., its structure) were inconsistent with their current practice and theoretical orientation. Additionally, the FCU's complexity posed challenges to its integration into service delivery systems, impeding organization-wide uptake.

Purpose of this Study

This study uses qualitative data to understand barriers and facilitators in scale-up of the U.S.-developed FCU in Sweden. Based on previously collected data, we also compare barriers and facilitators in Sweden to those in the United States to explore implementation factors that are salient cross-country versus those that are country-specific. Finally, we apply the FCU IF, which draws from existing implementation frameworks (i.e., EPIS and ID), as a conceptual framework to guide cross-country transport of EBPs. The FCU IF focuses on identifying barriers and facilitators that link to drivers at each implementation phase to pinpoint what and when barriers and facilitators might impact transportability and to identify corresponding capacity-building activities to promote successful cross-country transport. This study promotes a culture of prevention by contributing to our understanding about how to support readiness to implement evidence-based interventions that prevent the onset of child problem behavior.

Method

Participants

Participants were the five-member team primarily responsible for dissemination of the Family Check-Up in Gothenburg Sweden. This Swedish purveyor team included four clinical supervisors/administrators and one implementation specialist.

Procedures

Data were collected from four respondents via a phone-based focus group and from a fifth participant, who was unable to participate in the focus group, via a Skype-facilitated individual interview. A semi-structured interview approach (DiCicco-Bloom & Crabtree 2006) and interview guide was used to facilitate the focus group and interview, which began with a general, open-ended inquiry about each driver (e.g., “Tell me about your methods and experiences training providers?”), followed by more probing questions to clarify barriers and facilitators encountered during scale-up. The flow was flexible and the discussion moved back and forth between drivers, as prompted by the participants. The first author conducted the focus group and interview. The focus group and interview were audio recorded and transcribed. All procedures were approved by the Arizona State University Institutional Review Board.

Data Analysis

Focus group and interview data were analyzed using thematic analysis (Braun & Clarke 2006). The first and second authors, knowledgeable about the EPIS and ID frameworks, independently coded transcripts. Coding involved four steps: (1) extract data excerpts representing barriers and facilitators from the transcripts and classify extracts as a competency, organization, or leadership driver; (2) further categorize competency data extracts as related to provider selection, training, consultation, or fidelity assessment and further categorize organization data extracts as related to facilitative administration, systems intervention, or decision support data systems; (3) code each data extract within drivers as relevant to one or more of the FCU IF implementation phases; and (4) specify themes reflected in each data extract. A coding rule was data extracts could be classified as related to only one driver but relevant to multiple implementation phases. Data extracts ranged from a single phrase to multiple sentences.

Once coding was completed, the two coders met to assess reliability on: (1) data extracted; (2) coding of data extracts as related to a competency, organization, or leadership driver; (3) coding of implementation phases; and (4) themes specified for data extracts. Some data could

not be classified as a driver, instead reflecting barriers and facilitators related to one of two themes: the U.S. Sweden collaboration or FCU-specific factors. After independently coding remaining data using these themes, the coders met to assess cross-coder reliabilities and resolve discrepancies. Interrater agreement was (1) 80% on data extracted (i.e., there were 99 data excerpts extracted; both coders independently extracted 80% of the 99 and 20% were extracted by only one coder); (2) 76% on coding data as related to a competency, organization, or leadership driver or to the United States-Sweden collaboration or as FCU-specific; (3) 77% on coding of implementation phase; and (4) 84% on theme. Interrater agreement was a proportion equal to the number of times coders agreed across all 99 data excerpts. The two coders met with the third author to discuss and achieve consensus on coding discrepancies.

Results

Barriers and facilitators are presented as related to competency, organization, leadership, the U.S.-Sweden collaboration, or the FCU model (see Table A1 in online appendix for a summary of results). Barriers and facilitators sometimes represent the same but opposing theme (e.g., available resources are a facilitator, lack of resources is a barrier); presentation of factors influencing implementation as a barrier or facilitator aligns with the Swedish team’s experience.

Competency Drivers

Provider Selection Several barriers and facilitators related to developing workforce competencies were identified. Provider-model misfit was a critical barrier in the preparation phases. Providers who did not have the time required for training and certification or who lacked pre-requisite skills were not a good fit. Providers’ perception that the FCU was a complex model was another barrier that impeded uptake. Made aware of these barriers, the team adapted their implementation model to include a readiness planning process in the exploration phase to inform providers about the delivery process, including time requirements, and perceptions about the model’s complexity were addressed directly. This process became an important facilitator of provider selection, particularly as dissemination progressed and provider self-selection became increasingly normative. Turnover during the implementation and sustainment phases was also a barrier; sustaining the FCU required selection of new providers to learn and adopt the model.

Training The capacity to iteratively adapt training based on lessons learned promoted the acceptability and success of FCU training. For example, trainers shifted to more hands-on, experiential training delivered in small groups, which was more desirable and more likely to promote competency. Trainer emphasis on how the FCU was congruent with or could enhance providers' current practice also facilitated training. For example, it was important to highlight that the FCU's focus on using assessment data to tailor interventions was consistent with clinical best practices that providers were already employing (e.g., intake assessment to formulate a treatment plan). Facilitators of provider engagement were protected time to participate in training and providers' belief that training strengthened general clinical competencies. A training-related barrier was the lack of a train-the-trainer model, which impeded the process of replacing trained and certified providers that left their positions. Because the purveyor team did not have a train-the-trainer model, they were responsible for training new providers to sustain capacity at the site.

Consultation, Certification, and Fidelity Monitoring A facilitator of competency and uptake in the implementation phase was encouraging providers to use the FCU and receive consultation soon after training. Another related facilitator was the provision of protected time to participate in consultation activities. A barrier early in the implementation phase was that they were often trained in multiple EBPs, which diminished their interest and motivation to develop expertise in the FCU. A facilitator of competency in the implementation and sustainment phases was that FCU certification was often a requested qualification in employment advertisements; this incentivized certification and maintained providers' practice of the model. A barrier was providers' experience of the certification and fidelity monitoring process as demanding. For example, certification required videotaping sessions, which was not common practice. Moreover, providers experienced fidelity monitoring as judgmental. The capacity to adapt the consultation model increased its acceptability and maintained provider engagement in consultations. In the sustainment phase, peer supervision and quarterly conferences sponsored by collaborative networks of certified providers sustained competency. The conferences offered certified providers opportunities to stay connected to model champions and the Swedish purveyor.

Organization Drivers

Facilitative Administration Site administrators' engagement in the implementation process was a significant facilitator of FCU implementation at the site level. Engagement included involvement in the readiness and provider selection process, helping to resolve implementation barriers, and continuing to

champion the FCU when there were barriers, rather than supporting providers' regression to less structured, non-EBP models. Consequently, readiness planning in the exploration phase included educating administrators about the intervention and implementation models and motivating buy-in. Site administrators facilitated implementation by offering providers protected time to participate in training, consultation, and certification activities and by communicating that time spent in these activities was integral to their role at the agency. A barrier to implementation was incongruence between administrators and providers in terms of readiness to adopt the FCU. For example, providers were ready and motivated but administrators were resistant to absorbing new responsibilities or vice versa.

Decision Support Data Systems Employing data systems to support decision-making facilitated implementation. For example, implementation success was linked to sites that used data to identify whether the model was a good fit for their agency and initiated implementation only if the fit was good. In contrast, implementation was challenging when sites did not use these data. Another barrier was that sites did not take advantage of the "power" of the FCU or EBPs more generally. Although implementing EBPs may require more resources (e.g., time, money) than non-EBPs, they are highly effective in changing targeted outcomes. However, because sites did not routinely monitor program outcomes, sites did not have the opportunity to observe that implementation of an EBP significantly impacts outcomes.

Systems Intervention Legislative policies supporting a shift to EBPs and corresponding allocation of monies were significant facilitators in the exploration phase. Another facilitator was a strong regional administrator who was familiar with the FCU and its robust evidence and championed the program. In the implementation and sustainment phases, reorganization and leadership turnover within the purveyor organization diminished administrative stability and affected purveyor's capacity to disseminate the FCU, though the purveyor's commitment to implementation and sustainment countered this effect. Implementation was sustained by agencies recognizing that FCU certification developed providers' capacities to better serve families; this translated to specifying FCU certification as a desired qualification in job advertisements. Continued fiscal resources for training, consultation, and ongoing implementation also facilitated sustainment. Engaging in full transfer from the U.S. purveyor during scale-up was a barrier. Another complication during implementation was that the purveyor's home organization was located within primary healthcare, but FCU dissemination targeted social service agencies. The FCU's adaptability for other systems was a facilitator of sustainment, however, and the purveyor is currently integrating the FCU into primary care.

Leadership Drivers

A barrier in the exploration phase was that leadership did not engage in the readiness process and was thus unable to effectively guide the site through the change that accompanied the newly implemented FCU. Across phases, a barrier was a leader who was unaware of or chose not to intervene in organizational practices supporting provider training in multiple EBPs by changing these practices or by guiding providers on how to integrate training to optimize family outcomes. Training in many EBPs diminished provider motivation to develop FCU skills.

FCU-Specific Facilitators and Barriers

In the exploration phase, the FCU's emphasis on parenting as a mechanism to change child behaviors was a facilitator because it was consistent with the Swedish value of family centeredness. The FCU also met an important service gap. Although group-delivered parenting interventions were already in practice, there was a need for an evidence-based parenting program for use with individual families. In addition, based on U.S. conducted research, there was strong support for the FCU's effectiveness. However, due to an affinity for home-grown models, a barrier was that the FCU was developed outside of Sweden. A barrier in the implementation phase was that administrators and providers perceived some components of the implementation (e.g., readiness planning) and intervention (e.g., videotaped family interaction tasks) models as burdensome. However, during implementation, the model's appeal as an adaptive intervention easily tailored to an individual family's needs and context facilitated uptake and integration into existing practices. Moreover, the utility of the FCU assessment as a tool to help providers select the optimal follow-up intervention from the several they were trained in was a facilitator of uptake. Providers also liked practicing the FCU because it improved general clinical competencies, and this has helped sustain the model. The FCU's adaptability to scale out to multiple service delivery systems, such as primary care and schools, also facilitated sustainment.

Facilitators and Barriers Related to the U.S. Sweden Collaboration

The Swedish purveyor's collaborative relationship with the model developer and U.S. purveyor was a significant facilitator of the FCU's dissemination in Gothenburg. A recurring theme in the focus group and individual interview was that the collaborative co-development of the training, consultation, and implementation models resulted in a positive relationship between the U.S. and Swedish teams and sustained the

Swedish team's motivation and enthusiasm to disseminate the FCU. The program developer's respect for the Swedish team's autonomy as an international purveyor of the FCU and support for a Swedish-led, bottom-up adaptation process reinforced collaboration and promoted a positive relationship between partners.

Discussion

This study is a qualitative analysis of factors that facilitated and impeded dissemination of the U.S.-developed FCU in Sweden. We present the FCU implementation framework (IF) as a conceptual framework for cross-country transport of the FCU and EBPs more broadly. The FCU IF outlines what barriers and facilitators to assess for and when, as well as capacity-building activities that might support successful transport. Next, we summarize barriers and facilitators identified by the Swedish purveyor, and consistent with the FCU IF, link these to capacity-building activities that promote implementation readiness. We also discuss similarities and differences in barriers, facilitators, and corresponding capacity-building activities in Sweden and the United States.

Summary and Directions for Capacity-Building Practices

Strengthening Competency and Workforce Capacity Consistent with other research (Chaudoir et al. 2013), selecting providers that are a good fit for the model based on skills and personality (e.g., open to innovation) was a competency driver in Sweden and the United States. Accordingly, an important capacity-building strategy is to employ empirically and theoretically informed provider selection processes. In the United States, we use data to characterize effective FCU providers to inform selection and to assess if a service setting has the workforce to deliver the FCU. Barriers in the implementation phase were providers' limited time for consultation and their discouragement due to the model's complexity. In response, the Swedish team initiated readiness planning in the exploration phase to ensure providers understood FCU time requirements and initiated a feedback loop to iteratively adapt and simplify the model. Lack of awareness about time requirements and model complexity were also barriers in the United States. As in Sweden, the U.S. purveyor initiated a provider orientation and use of provider-driven feedback loops throughout implementation to support iterative adaptations. Among Swedish providers, training in multiple EBPs was a disincentive for certification. To address this barrier, the Swedish purveyor assessed providers' experience with EBPs and proactively devised a training plan to integrate the FCU with other EBPs. Offering continuing education credits for consultation could

also incentivize participation in consultation. Turnover post-training challenged sustainability in both countries. In Sweden, FCU certification was a marketable skill providers could leverage to get a new job. This incentivized certification and, for sites wanting to sustain the FCU, created a pool of FCU-certified providers for hire. To offset the impact of turnover, purveyors can advocate for credentialing organizations to link professional licensure to EBP certification, incentivizing certification and increasing agencies' ability to hire EBP-trained providers. An organizational culture that normalizes professional development activities (e.g., peer supervision) could also support workforce competencies.

Developing Organizational Capacity Organizational policies that protect providers' time to develop expertise in EBPs facilitate uptake (Fixsen et al. 2009). In Sweden, agency administrators allocated 50% of providers' time to FCU activities. However, these policies were most effective when administrators also engaged in the implementation. In response, the Swedish purveyor added a motivation-building component to readiness to engage administrators. National policies supporting EBPs and corresponding fiscal support were also key facilitators in Sweden.

Consistent with Fixsen et al.'s (2009) emphasis on decision support data systems as a driver of implementation, a barrier in both countries was that sites lacked the capacity to collect and use data. In Sweden, implementation was unsuccessful when sites did not collect readiness data or collected it but did not use it to inform implementation. In the United States and Sweden, sites lacked the capacity to monitor implementation process and outcomes, which precluded demonstrating the positive effects of the FCU. An important component of evidence-based practice involves the systematic evaluation of outcomes and process. Even so, sites frequently implement EBPs in the absence of data systems that link outcomes to implementation (Garland et al. 2003). An important exploration phase activity is to assess site capacity for collecting and using data; supporting sites' efforts to build these capacities in the preparation and implementation phases would enhance implementation. However, although data systems are useful, it is important to employ them sensitively; for example, providers in both countries experienced fidelity monitoring as judgmental. In the United States, providers noted that not understanding the metric used to assess fidelity contributed to feeling judged. Hence, we now train providers on the COACH and encourage its use in self-assessment and peer supervision.

In Sweden, administrators' challenges establishing and maintaining relationships with other organizational leaders had a trickle-down effect that halted the dissemination of the FCU. Site reorganization and administrator turnover also impeded implementation. Conversely, an administrator who championed the FCU and had influence across organizational, political, and economic systems was a key facilitator. In the

United States, interactions between administrators across systems were not a barrier, as in Sweden, but poor communication between higher-level administrators and providers was. For example, administrators committed providers' time to implement the FCU without clearly communicating these expectations or how to integrate the FCU with current practices. Collectively, these findings highlight the importance of assessing organizational climate and culture, including relational dynamics among staff and administrators, and building capacity to promote relational dynamics that support sustainable implementation.

Developing Leadership Capacity Implementation site leaders did not take an active role in coordinating and optimizing the impact of provider training in multiple EBPs. For example, most providers were trained in several EBPs but received no direction on how to use these programs in any integrated or systematic way. Consequently, they employed components of all EBPs in a haphazard way and had no internal or external motivators to develop expertise in any one EBP. Upon recognizing this barrier, the Swedish purveyor began framing the FCU in training as an intervention that could be easily integrated with and supplement their current practice. In the United States, as in Sweden, the leadership's failure to understand and convey to providers how the FCU was congruent with and supplement to their current practice was a barrier to dissemination. In training, the U.S. team also now emphasizes how the FCU and other EBPs can be used together to optimize the impact of providers' training and expertise in EBPs on family outcomes. Because administrators also sometimes shared this "more is better" perspective related to EBP training, the readiness and implementation planning processes now educate administrators on how the FCU can optimize providers' expertise in all EBPs.

The Impact of Intervention-Specific Facilitators and Barriers on Capacity-Building

FCU-specific facilitators in the United States and Sweden were (1) strong empirical support, (2) usability with individual families when most parenting services were group-based, and (3) adaptability to fit the needs of individual families across cultures. The FCU is inherently culturally flexible because it is an adaptive intervention, tailored to each family's needs and context, including cultural norms and values (Dishion & Stormshak 2007). Indeed, being "observant and responsive" to a family's needs is a dimension of FCU adherence (Dishion et al. 2010). Because cultural heterogeneity is increasingly common, flexible models that do not require culture-specific adaptations are increasingly appealing and may be better suited for cross-country transport (Webster-Stratton 2009). Although the FCU was initially delivered via social service

agencies, its adaptability made it feasible to also implement in alternative service settings (e.g., primary care), which increased its appeal. Although model complexity diminished its appeal in the United States and Sweden, both purveyors instituted processes to iteratively adapt training, consultation, and implementation to continually enhance acceptability and feasibility.

International Collaboration

The collaborative process between the U.S. and Swedish purveyors was a key facilitator of the FCU's dissemination in Gothenburg. This process supported a hybrid bottom-up, top-down adaptation of the FCU that balanced the Swedish purveyor's autonomy and cultural expertise with guidance from the United States. There was a bi-directional exchange of knowledge and lessons learned that iteratively shaped the implementation model in both countries. This collaboration contributed to a professionally and personally rewarding and ongoing relationship that contributes to the FCU's sustainment in Gothenburg. In partnership, the U.S. and Sweden teams continue to address challenges such as localizing quality assurance, promoting FCU sites' self-sufficiency, and adapting training, consultation, and certification to enhance acceptability and feasibility. The United States and Sweden also co-sponsor an international conference to unite practitioners and scientists involved in FCU implementation globally.

Study Limitations

The FCU was a local initiative limited to Gothenburg; because policies, culture, and economics may differ between communities, the study's generalizability may be limited. Related, the study's results may not generalize to low- or middle-income countries. In addition, although the conceptual model proposed in this paper should generalize to other EBPs, its development is based on FCU implementation only and does not yet have empirical support for application to other EBPs. Another important limitation is that the results are based on qualitative data from a small number of participants ($n = 5$) who represent the perspective of the Swedish purveyor only. A mixed-method design including concurrent survey data collection from FCU providers and administrators would have strengthened the study. Mixed-method approaches are being used increasingly in implementation research because they offer a rich understanding of reasons that program implementation succeeds or fails (Palinkas et al. 2011). Also assessing providers' and administrators' perspectives about barriers and facilitators would have offered a more robust conceptualization of the competency, organizational, and leadership drivers that influenced the FCU's cross-cultural transportability.

Including provider and administrator perspectives would have also strengthened the study because their perspectives about barriers and facilitators may differ from those of the purveyor (Green & Aarons 2011).

Conclusions

This study introduces the FCU IF as a conceptual framework to guide what countries should assess and do at each phase of implementation to optimize dissemination of a preventive intervention transported across countries. The FCU IF, based on models and frameworks in the implementation science literature, involves specifying driver-related barriers and facilitators that might impact transportability at each implementation phase and applying these data to identify driver and phase-specific readiness-building activities. To the extent that a culturally broad and flexible framework can facilitate cross-country transport, it has the capacity to promote a global culture of prevention. We identified similarities and differences in scale-up barriers and facilitators in the United States and Sweden. In general, barriers and facilitators encountered in Sweden were also impactful in the United States, suggesting that factors influencing implementation can traverse countries. This study also suggests implementation frameworks can be used to guide cross-country transport of preventive interventions by helping communities build implementation readiness. Promoting a culture of prevention depends on a community's readiness to use evidence-based practices to address problems preventively rather than reactively. This study promotes a culture of prevention by contributing to our understanding about how to support readiness for implementation of evidence-based interventions that prevent the onset and escalation of child problem behavior.

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Compliance with Ethical Standards

Conflict of Interest Dr. Thomas Dishion is the developer of the Family Check-Up model and Dr. Anne M. Mauricio is the Director of Implementation at the Arizona State University REACH Institute. The authors declare that they have no other conflicts of interest.

Ethical Approval All study procedures and measures were reviewed and approved by the Arizona State University Institutional Review Board and in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all participants in this study.

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