The Ecology of Sustainable Implementation

Reflection on a 10-Year Case History Illustration

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Abstract. The primary aim of this paper is to illustrate the strategic and ecological nature of implementation. The ultimate aim of implementation is not dissemination but sustainability beyond the implementation effort. A case study is utilized to illustrate these broad and long-term perspectives of sustainable implementation based on qualitative analyses of a 10-year implementation effort. The purveyors aimed to develop selective community prevention services for children in families burdened by parental psychiatric or addictive problems. Services were gradually disseminated to 23 sites serving 40 municipalities by 2013. Up to 2013, only one site terminated services after initial implementation. Although many sites suspended services for shorter periods, services are still offered at 22 sites. This case analysis is based on project reports, user evaluations, practitioner interviews, and service statistics. The paper focuses on the analyses and strategies utilized to cope with quality decay and setbacks as well as progress and success in disseminating and sustaining the services and their quality. Low-cost multilevel strategies to implement services at the community level were organized by a prevention unit in child psychiatry, supervised by a university department (purveyors). The purveyors were also involved in national and international collaboration and development. Multilevel strategies included manualized intervention, in-practice training methods, organizational responsibility, media strategies, service evaluation, staff motivation maintenance, quality assurance, and proposals for new law regulations. These case history aspects will be discussed in relation to the implementation literature, focusing on possible applicability across settings.

Keywords: implementation strategies, case history, implementation analysis, community services, sustainability

Implementation research is a relatively new research area with an impressive growth curve. However, some conclusions in the implementation literature are based on relatively scant evidence and must be considered beliefs and hypotheses rather than solid knowledge (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Grol, 2013; Klein & Knight, 2005). Long-term sustainability and its critical factors appear to be the least developed aspects of implementation (Fixsen et al., 2005).

The study of long-term sustainability can benefit from observational studies at the current stage of knowledge development due to the time aspects inherent in the subject. A case study cannot provide firm conclusions but can raise valuable questions for later evaluation. Furthermore, case studies may point toward complex interplay between factors and strategies (Grol, 2013).

This paper presents and analyzes a case study of an implementation effort spanning 15 years. The case was selected for its long duration with continual implementation and seemingly successful sustainability of services at 22 of 23 sites. However, setbacks, challenges, and threats that were overcome, as well as successful strategies, are considered more interesting than the success itself. The case is well suited for illustrating many of the challenges of long-term implementation. The purveyor organization was defined as a permanent service in 2003 to conduct a perpetual row of implementation projects at multiple sites in a designated area.

The aim was to establish manualized selective prevention services in communities with relatively modest resources available for prevention. These services would include tasks and approaches that were unfamiliar to local professionals. The suggested services, which were not mandatory for municipalities, did not receive state reimbursement.

This study aims to answer the following research questions:

- Are the implementation strategies suggested by this case study paralleled or supported in the present implementation literature?
- Can the implementation literature predict or suggest preventive measures for the setbacks and threats to quality and sustainability as perceived by practitioners and purveyors in this case example?

This paper is not organized as a classical empirical paper; rather, its organization follows the case narrative according to the typical stages of implementation as suggested by Fixsen et al. (2005). Discussions related to

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the implementation literature will be nested within the narrative, concluding with suggestions for local improvements to sustain the results of this implementation effort. Major questions with potential applicability across settings are left for the final discussion.

Methods

The 10-year implementation effort built on a previous local project conducted from 1998 to 2002, totaling 15 years of case history included in this case study. The active implementation effort has lasted 10 years from the first service started in 2003. Services were gradually disseminated to 23 sites serving 40 municipalities by 2013. An additional five sites terminated implementation before the service was established. Up to 2013, only one site terminated services after initial implementation. Many sites suspended services for shorter periods, but services are still offered at 22 sites. The network has reached full geographic coverage of a 22,000 km^2 area with 135,000 inhabitants and partial coverage in a larger area with 560,000 inhabitants.

The data used for the analysis are heterogenic and primarily collected from several qualitative sources. Most data were collected for other purposes and later systematized for the purpose of this study:

- Minutes from purveyor steering group meetings;
- Practitioner presentations at network meetings;
- Summaries from supervision sessions and evaluation meetings with practitioners;
- Internal reports summarizing implementation efforts;
- Interviews with purveyors and practitioners to evaluate the implementation process.

Most of these sources are not publicly available and will not be specifically referenced or listed in the reference list. These qualitative sources will be supplemented with operational statistics that quantitatively describe some activity aspects.

The choice and preparation of interventions will not be described or discussed in this paper. The aim was to implement selective prevention services, whereas the specific interventions were regarded as replaceable components, subordinate to the primary aim.

Case Narrative

Phase 0: Exploration and Adoption

The case history began with a discussion of possible effective prevention efforts; this topic was raised between managers in child and adolescent psychiatry and adult psychiatry at a local hospital. This discussion concluded with selecting children of adult psychiatry patients as a target for selective prevention.

After internal surveys, a literature search, study visits, and seminars, the steering groups decided to offer an extensive educational program about "children at risk" including supervision groups, to municipal professionals and psychiatry personnel. The participant feedback was positive but called for training in how to use their newly gained knowledge and understanding in establishing preventive services. Thus, the investment in increased knowledge resulted in little practice change, as demonstrated in other studies (Klein & Knight, 2005). Training specific behavioral capacities were considered as the necessary future strategy by the purveyors.

Faced with this challenge to establish preventive services, adult psychiatry decided to limit their involvement and focus on improvements in patient record structure and for child visitors within their own department. They saw prevention as outside their clinical priority and mandate. This setback illustrates the dependence on solid purveyor commitment and stability when attempting to launch implementation efforts (Grol, 2013).

This setback challenged the remaining purveyor group to clarify their priorities. It was concluded that prevention services should be based in community services, which are more accessible and familiar to the population than hospital psychiatry departments. However, it was considered unrealistic to expect that community services in the area would be capable of building this competence. Community service personnel were not accustomed to manual-based interventions and experience with group-formats was rare.

Furthermore, the prevailing therapeutic focus among professionals was observed to be partly incompatible with a preventive approach and philosophy. Present community practices were focused on early detection of developmental problems or neglect, and offering information, support, and encouragement to all parents. Prevention would require a focus on risk rather than symptoms, and strengthening specific resilience capacities among selected children and parents, rather than a general supportive approach.

The child psychiatry department offered municipalities to collaborate with them to implement prevention services. Purveyor personnel resources were considered necessary to assist municipalities in their development process. Thus, a part-time coordinator position was designated and placed in the family section of the department. Furthermore, these situation analyses instigated a focus among the purveyors on values and philosophy, and the need to shape practitioners into prevention workers. This exemplifies the need for extensive preparations including organizational culture and values, and personnel selection and training when there are significant differences between current and intended practices (Barnoski, 2002).

Legally, prevention was encouraged but not mandatory for the specified risk groups. The top management in the hospital primarily focused on clinical productivity and wanted to cut secondary activities. Economically, the reimbursement system did not support prevention services or supervision across service levels. However, municipalities and the hospital could apply to state authorities for psychiatric service improvement grants, which were done.

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The purveyors expected to encounter obstacles at several levels. The major concern was for the effort to only result in short-lived service improvements, which could occur from lack of local management ownership and service quality decay. This concern was based on experience with time-limited local experimental projects. The concern was not based on the implementation literature, which was largely unknown, and this literature had not yet clearly addressed sustainability as a separate implementation challenge (Fixsen et al., 2005).

Phase 1: Program Installation

The municipality piloting implementation entered into a close partnership with the purveyor group to plan and start prevention services. Later implementation sites were selected based on municipality readiness and motivation, only offering implementation to municipalities that actively asked for inclusion. Readiness was primarily focused on their willingness to elect, preferably at a political level, establishment of a preventive mental health service and allocate permanent, yet small, resources. Services should not be defined as a project depending on time-limited external funding. Furthermore, the required preparations included to assign management responsibility, appoint a local service coordinator, and select the first practitioners for training.

To further strengthen commitment, intervention manuals and intervention materials were lent to the municipalities that affirmed continual quality assurance and a long-term participation in a network organization. The municipalities were expected to pay a small fee, which would be allocated to cost of printing brochures, manuals, and intervention materials. Initial and future training and supervision would be provided for free. This combined controlling and rewarding approach was intended to outweigh the lack of legal obligations and economic incentives using a combination of reinforcement, social interaction, and potential coercive strategies (Grol, 2013).

Analysis and use of active strategies related to readiness and obstacles at the organizational level have been recommended by Chase (1979) and many others (e.g., Fixsen et al., 2005; Grol, Bosch, Hulscher, Eccles, & Wensing, 2007). In the present case, the previous investment in a comprehensive educational effort most likely resulted in good municipality and child psychiatry preparedness for the following implementation initiative. Thus, community readiness was both influenced actively and evaluated as recommended by several authors (e.g., Adelman & Taylor, 2003) However, no instruments were used to evaluate readiness (e.g., The Community Readiness model; Edwards, Jumper-Thurman, Plested, Oetting, & Swanson, 2000) and no structured planning tool was used (e.g., Intervention Mapping (Bartholomew, 2006) or The Hexagon Tool (Blase, Kiser, & Van Dyke, 2013). Such tools could have eased the planning process considerably.

Given the relatively generous purveyor terms to support the establishment of prevention service, municipalities queued for implementation during the first 3 years. The implementation organization had to be temporarily scaled up with additional supervisors recruited in psychiatry and addiction departments. During the 10 year implementation history, only five sites reversed their implementation intent prior to installation. These five sites were reluctant to enter the quality assurance regime. They were also all located some distance from the main purveyor site and close to distinguished professional centers that did not participate in the implementation effort. This confirms research indicating that distance is a risk for dropping out of implementation (Wolf, Kirigin, Fixsen, Blase, & Braukmann, 1995).

Although one community service in each municipality was formally responsible for prevention service, personnel recruitment was encouraged across services based on aptitude and motivation.

Phase 2: Initial Implementation

Purveyors anticipated a need for close monitoring of training outcomes and possible quality decay among practitioners during subsequent years in established practices. Based on empirical studies of prerequisites for learning new behaviors (e.g., Dancer et al., 1978; Maloney, Fixsen, & Phillips, 1981), the purveyors chose these principles for training practitioners: Following an initial two-day introductory course, practitioners were offered "in-practice" training with manuals. This training started with observing and assisting supervisors conducting the actual intervention with clients. Subsequently, the practitioners would take over in conducting the intervention, assisted and coached by supervisors during operation. This observational learning and coaching continued until acceptable mastery of behavior elements (as detailed by the manual) and core attitudes (as detailed by purveyors and supervisors) was achieved. Thus, any new practitioner would be observed and coached during at least one complete intervention series. This training model is well supported by later publication about quality control methods (Garland & Schoenwald, 2013).

No opposition to the use of intervention manual was encountered, and the first intervention manual was well accepted. These manuals had been developed and tested in practical use during a 10-year process at development sites in other countries, and had been adapted to culture and service system during a translation process. This feasibility testing and refinement probably contributed to manual acceptability in the eyes of the practitioners (McColl, Smith, White, & Field, 1998; Mihalic & Irwin, 2003).

Practitioners at two implementation sites found the training process to be too lengthy and gradual. In response to this criticism, accelerated progression was allowed routinely when practitioners felt ready for increasing challenges and was considered ready by supervisors. This illustrates the possibility of increased effectiveness in stable purveyor groups, which allows learning from the experiences at consecutive implementation sites (Fixsen, Blase, Timbers, & Wolf, 2001; Winter & Szulanski, 2001).

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The implementation was piloted at a site with favorable conditions as recommended by Gendreau, Goggin, and Smith (1999) (strong leadership support, suitable and motivated personnel available). Although this approach might be wise for inexperienced purveyors, such strategies may create the risk of underestimating challenges when later sites are considerably more difficult. However, in the present case, purveyors put priority on letting pioneer supervisors become accustomed with the intervention and the training model, as supervisors had to start conducting the intervention without prior experience with it. This also required careful selection of the first supervisors as for suitability and competence.

Phase 3: Full Operation

Five feedback strategies were used to assure quality during full operation. First, colleague feedback on fidelity was done in a routine evaluation meeting after each session, related to the session objectives as detailed by the manual. Second, the manual included evaluations by children and parents within the last sessions of the intervention. Third, all practitioners were invited to network meetings twice a year. The use of network meetings as a quality strategy is detailed later.

Personnel turnover totaled less than 5% each year, which is well below the 25% maximum turnover rate recommended by Gendreau et al. (1999). In cases of personnel turnover, colleague practitioners well acquainted with the intervention and approved by a supervisor to do so, trained new practitioners in using the manual during normal operation. This was done using the same modeling/coaching procedure they had experienced themselves with a supervisor during training. Finally, new practitioners' skills should be observed and approved by an experienced supervisor during a live intervention session. However, up to 2010, many new practitioners at old sites missed the two-day introductory course and the supervisor approval. This situation apparently occurred due to lack of written guidelines for personnel training.

One site had a complete practitioner turnover and pause in services twice during the case history. This site had a nonstandard organization of local services. Furthermore, services were reorganized and managers changed on several occasions during the implementation period. Local practitioners indicated that these factors resulted in a weaker local management ownership of the intervention and looser integration in the service organization. However, the network ensured training and motivational support for new practitioners despite the unstable local context.

The procedure of discussing readiness and mutual obligations with municipality management and politicians was not followed for some years during the middle period of the implementation effort. This failure partially resulted from a lack of implementation routine documentation and the inclusion of new supervisors. No municipality or implementation site ceased participation due to this error. However, the error identified a weakness in the implementation effort. The implementation process itself may require manuals, checklists, evaluation, or feedback procedures in similar ways as interventions (Grol, 2013).

At network meetings purveyors recurrently solicited initiatives for positive local media exposure during full operation. Practitioners were invited to share their media exposure, which was distributed throughout the network. Forty local media exposures were registered related to almost 200 completed intervention series during the first 10 years. One purpose of this was to strengthen practitioner confidence and proudness. However, the primary intention was to influence public service acceptability and reputation, a challenge often neglected in implementation, but systematically addressed in social marketing theory (Grol, 2013).

In the early full operation phase, supervisors identified few fidelity problems, and user evaluations and practitioner feedback were dominated by positive experiences. Practitioner evaluations ascribed this initial success to the combination of quality manuals, the training model, and coaching quality. The balance between quality and fidelity assurance and aiming for competence and independence was seen as attractive. Practitioner evaluations indicated that the network meetings inspired confidence in their own abilities and supported fellowship across service sites.

Practitioner feedback highlighted another important weakness of the implementation. The intervention was well manualized, but the manuals did not include guidelines for the often challenging process of recruiting and motivating families to participate. This later led to the distribution of a separate manual for such talks, but its use is not yet fully implemented.

Phase 4: Innovation

During network meetings, practitioners were encouraged to share their successes and positive experiences and discuss problems related to the intervention manual and the recruitment processes. Purveyors recommended that any substantial adaptation and change should be discussed with supervisors or presented for discussions in a network meeting. Such incidents increased with time and experience. Acceptable innovative alternatives and improvements gleaned from practice can be valuable contributions to the standard model (Winter & Szulanski, 2001) and important to improve practitioners experience of intervention feasibility (Bierman et al., 2002). However, innovation may represent problematic drift that should be corrected (Adams, 1994). Routines to evaluate and approve or reject innovation are needed.

In the present case, a positive attitude toward innovations as potentially valuable and important to share was repeatedly stressed, whereas the possibility for problematic drift was less focused. This was done primarily to stimulate mutual confidence and trust between practitioners, supervisors, and purveyors, as a prerequisite for open presentation of innovations to others. Secondly, a more strict focus on negative drift could have suppressed reports and discussions of positive innovation as well as negative drift.

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Some incidents of "secretive" innovation that contradicted intervention principles were discovered, where manual changes had been done without any prior or subsequent supervisor consultations. In network meeting discussions this phenomenon was termed as "prevention 'adolescent' emancipation" to interpret this as a normal and expected but potentially problematic by-product of the desired acquisition of competence and independence.

Evaluations from parents and children did not reveal any occurrences of negative drift, but could have done so if asking specifically about intervention components and conduct, such as in the evaluation routines of MST (Henggeler, Schoenwald, Liao, Letourneau, & Edwards, 2002).

These network processes resulted in some improvements integrated into the intervention manuals, mostly as flexibility alternatives, or in other materials. However, most of these discussions raised issues not covered by the intervention manuals. The recurring themes were challenges related to parent/family recruitment efforts, introductory home visitations, child and parent motivation, and media strategies. These challenges were sources of insecurity and frustration for practitioners that stimulated innovation and trial-and-error experimenting, sharing ideas with colleagues, and discussing strategies with supervisors. However, these initiatives illustrate the need for supplementary manual parts or supportive documentation for such necessary support activities, not only the core intervention (Grol, 2013).

One major innovative initiative, which arose from the network activities, called for legal obligations to address child needs in situations where parents are burdened. This idea, which arose from several sources including this implementation network, was communicated by the purveyors to government agencies and channeled through national NGOs. In 2010, these initiatives resulted in a set of law revisions (Barn som pårørende [Children as next of kin], 2010) to secure child needs related to parental illness, and regulations that allow mutual family health information in child and adult patient records (Solantaus & Puras, 2010).

After five years, coverage expanded beyond the initial 200 km radius and included several sites at a distance from 250 to 450 km. Practitioners at remote sites gradually failed to attend some network meetings. As a counterstrategy, a secondary network hub was established to arrange a parallel network meeting once a year. Another secondary network hub has been planned for 2014. These changes successfully increased attendance at network meetings and stimulated local loyalty and fellowship by reducing travel distance as suggested by other implementation efforts (Wolf et al., 1995).

Practitioners were given two types of internal career opportunities. Motivated practitioners were offered training on a second and third intervention. The most skilled practitioners were allowed to train colleagues and later to serve as supervisors. Selected supervisors were coached to lead network meetings in secondary network hubs. Such career opportunities are rarely addressed in the literature, but must be common in implementation practice. Such opportunities may be vital to retain skillful and talented practitioners within an implementation organization.

Phase 5: Sustainability

During the 10-year period, local coordinators reported several local budget cuts that threatened to terminate the prevention services. However, termination has not happened at any site, in contrast to the five sites that dropped out before the initial implementation. Coordinators have reported that low cost, purveyor support, the network organization, as well as positive practitioner and user satisfaction were decisive arguments that stopped proposed cuts.

Later case history reports highlighted a threatening weakness in the implementation strategies. Practice statistics (see Figure 1) indicate an emerging problem by showing an increasing trend toward pauses in services. According to reports from local coordinators this happened due to failing recruitment of appropriate families although inclusion criteria were clear. Supervisors raised the question whether this emerging problem reflects the lack of procedures and manualization and training in recruitment strategies. However, they also reported little recruitment through adult health, psychiatry, and addiction services. These services would logistically be the most relevant service points to "intercept" relevant families based on parent service use.

According to personnel working with implementing the law revision passed in 2010 (Barn som pårørende [Children as next of kin], 2010), adult service professional are still somewhat reluctant to discuss children and parenting with their clients despite their new legal obligations to ensure support for client children (Solantaus & Puras, 2010). Prevention practitioners are therefore faced with two difficult alternatives: Attempt to find more appropriate families personally or engage in activities to stimulate and support implementation of new practices in reluctant adult services.

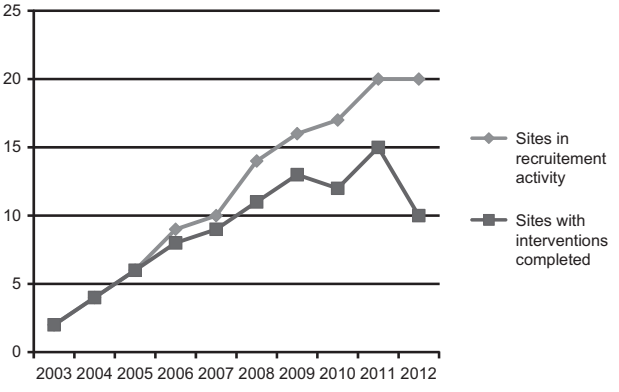

Figure 1. Number of implementation sites with recruitment or intervention activity during the 10-year implementation period: 23 sites initiated in a step-wise fashion, but no site initiated in 2012; 1 site terminated in 2009; missing data from 2 sites.

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Practitioners that were asked to identify what they have experienced as vital to sustainability identified several aspects: The intrinsic motivation gained during the interventions, including trust, growth, and positive feedback from children and parents. They experienced the intervention tasks as meaningful and energizing, despite being confronted with neglect and suffering as well as difficult child experiences and feelings. Additionally, practitioners identified the availability of supplementary supervision, the fellowship established during network meetings, and the long-term bidirectional commitment between purveyors and municipalities. This stability, commitment, and positive focus ensured that difficulties, challenges, and setbacks could be transformed into increased competence and coping.

Many practitioners stated that sustainability depends on the strength of "a preventive culture" as expressed in values, attitudes, and behaviors. These were detailed as the belief in competence, potentials, and coping capabilities despite difficulties. This preventive culture was experienced throughout all activities and levels of the network organization: In interventions, personnel training, supervision, evaluation discussions, network meetings, and attitudes toward children and parents. Network meetings, supervision, and coaching were considered the most important instrument to sustain this culture and value set and to maintain practitioner motivation and continued engagement.

Implementation reviews systematically state that a renewal-oriented culture as well as value compatibility between old and new practices are important prerequisites in implementation (Fixsen et al., 2005; Grol, 2013). However, the implementation literature does not discuss how the values and philosophy of new practices can be conveyed convincingly. This absence is peculiar in contrast to the evidence-based program definition that includes "... Clear philosophy, beliefs and value ...." as one of five characteristics (The Dissemination Working Group, 1999, cited by Fixsen et al., 2005). Historically, psychosocial interventions possibly had too great of a reliance on ideology and conviction rather than the practical and empirical bases. Nevertheless, practitioners that understand the "heart and soul" of an intervention may be better equipped to adapt and innovate interventions and avoid drift that negates the core effects. Therefore, I consider it vital to establish recurring arenas like network meetings and other channels that may allow repeated presentations and discussions regarding core elements and attitudes in interventions.

Case History – Suggestions for Local Improvements

From the viewpoint of this author, purveyors and their network still face a set of serious challenges, leaving the services with a continual reliance on the implementation purveyors to maintain sustainability. Many municipality services are still not capable of sustaining quality assurance and competence renewal in prevention based in their own culture and capacities. Some of the reasons for this continued situation are in my view found in the small size of most municipality administrations, and the lack of culture for routine monitoring of service quality.

Despite the successful establishment of services and the good intervention manuals, the case description shows several weaknesses. Many strategies planned and utilized in the early years were later forgotten or disregarded due to a lack of implementation manualization. These events included occurrences of missing formal and informal contracts with municipalities, delayed implementation of practitioner and supervisor certificates, failure to include "replacement" practitioners in introductory courses, lack of systematic client recruitment routines, and nonsystematic use of structured colleague practitioner evaluations. Other challenges are more difficult to resolve, such as the adult professionals' reluctance to address parenthood with clients and to recruit families for prevention services. Furthermore, guidelines and training for client recruitment are lacking.

Thus, a number of important support activities and implementation procedures are not documented in manuals, guidelines, or checklists. This is the most important suggestion for future improvement of the present case is development of such tools.

Speculation suggests that this network would be in danger of slowly crumbling if the purveyor group was phased out without any replacement for their coordinating functions. However, it is possible to envision sustainability with a minimum of continual regular network meetings, agreements to train and approve new practitioners at neighbor sites, and phone support provision by experienced colleagues in the network. Such a minimal remnant of the implementation organization could be sustained within ordinary services based on agreements across the network to exchange support between sites. Some support could also be mobilized by activating the hospital obligations to supervise municipalities. Such future perspectives should be discussed in the network and between purveyors before they occur.

This case history suggests an increased focus in implementation science and practice on the following subjects:

- Documented procedures for implementation and support activities;
- In-practice training with observational learning and coaching as training method;
- Arenas and channels to repeatedly focus intervention "heart and soul";
- Positively focused procedures to detect and evaluate innovation and drift;
- Renewal and maintenance of practitioner skills and confidence;
- Structures for challenge and setback support and supervision;
- Practice renewal and internal career opportunities;
- Long-term sustainability perspectives before initiating implementation;
- Strategies for sustainability without dependence on purveyors;
- Development of quality assuring and self-renewing service organizations.

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Discussion

Intervention statistics from this case history show implementation success and sustainability, although setbacks and difficulties are reported. Moderate to high fidelity is plausible based on the combination of practitioners' self-reports, supervisor observations, and child- and parent evaluations. This result is noteworthy given the lack of economic incentives, low budget, and nonspecific obligations to offer prevention services. The initially weak professional and management competence, the attempt to implement within existing services without securing extra funding, and the ambition for geographical dissemination represented challenges to this implementation effort. However, community readiness and practitioner motivation and stability have been favorable.

Overall, it is probable that the broad array of implementation strategies on many levels, including practitioner selection and training, client and practitioner feedback systems, organizational context and management, and government legal requirements and recommendations, was vital to implementation success.

It could be argued that these strategies exceeded the necessary requirements for implementation. However, it is unlikely that sustainable success would have been possible without at least this effort. During the same period, many local attempts and even national initiatives to establish similar services had small to limited effect by resulting in several but isolated local successes. Still, the total implementation resources (the addition to service operation costs) were maintained within the equivalent of one full-time staff person per year for most of this case history.

Despite the apparent success, the case history raises a serious question. Must sustainable implementation require this much effort in the future? Given the potential service needs and interventions available in a society, implementation must be worthwhile and cost-effective in a broader public perspective, not only from the aim of implementing each recommended intervention. There could be several potential options to increase implementation efficacy.

An ecological perspective suggests that organizational qualities, personnel competency, and client and community expectations will strongly influence how extensive effort will be required to implement new methods. Examples reporting effective implementation of new psychosocial methods typically include massive investment in training relatively basic practitioner skills and extensive development of organizations. Thus, strategies that focus on such generic factors instead of core philosophy and specific factors training may drain implementation resources. It would be more effective to demand health and psychosocial services to build generic competency in evidence-based practice and improvement, including practitioner and management competence, and organizational structure and culture.

Practitioners should be familiar with the following basic competencies:

- Using manuals and checklist and conducting group-formats;
- Fidelity evaluation and documentation through self-evaluation and observation;
- Using instruments for problem, performance, and outcome evaluations.

Managers should possess the following competencies:

- Competence in utilizing quality assurance strategies, including manuals and instruments;
- Understanding of evidence-based practice evaluation and improvement;
- Competence in organizational improvement and implementation;
- Understanding of requirements for behavior learning, change, and maintenance.

Organizations should possess several of the following qualities:

- A tradition of using manuals and procedures to support service quality attitudes and behaviors;
- A tradition of structured evaluation of problems, practice, and outcomes;
- An internal or supplemental capacity to organize practice change projects (implementation);
- An internal or supplemental tradition and capacity for coaching, supervision, and network involvements.

The abilities and competences should be secured during practitioner basic professional education and manager training and education. In the meantime such competence must be disseminated through supplemental continuing education. Thus, educational institutions should offer basic and continuing education to teach and train practitioners and managers such basic knowledge and skills required in implementing and sustaining evidence-based service improvements. This is required for organizations to effectively incorporate and take primary responsibility for continual evidence-based service improvement embedded in ordinary service delivery. If not, we will continue to drain implementation resources to secure such basic personnel and organizational requirements.

Purveyors in implementation efforts are in danger of creating a purveyor dependency by replacing and compensating for ineffective management and organizational systems rather than developing sustainability. Another danger is if implementation is prematurely terminated, inadequately conducted, or not attempted due to overwhelming challenges-related sustainability (e.g., Macallair & Males, 2004).

An ecological approach also presents an additional challenge for many evidence-based psychosocial programs and interventions: There is a need to specify and separate core components from necessary but insufficient generic components (Embry, 2004). Wrapping core effective components in large packages of organizational improvement and practitioner development is an ineffective future strategy. External research may be needed to define effective core elements in ways that may allow separate implementation of these in organizations that already have the required

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generic elements in place. In longer perspectives, both core elements and generic elements should be subjected to innovative improvement and evaluation resulting in component replacement rather than organizational reinvention.

This larger challenge represents developing our societies and organizations to become reliable deliverers of high-quality services capable of self-renewal. High-quality service organizations should be able to exchange or add specific procedures and intervention cores to their services without first having to develop or changing the entire organization.

Limitations

Case history descriptions and viewpoints presented in this case study are based almost exclusively on sources among purveyors and practitioners involved in the implementation effort. Because of this any suggestions and conclusions must be treated with hermeneutic caution. Practitioners and supervisors that left the network did not contribute and few external or independent information sources were available. Most suggestions from this case study coincide with the implementation literature, but a case study only suggests and illustrates hypotheses and perspectives which must be tested with other designs.

Conclusion

This case history suggests that implementation success requires multiple broad strategies that span all seven implementation approaches suggested by Grol (2013): cognitive, motivational, marketing, reinforcement, social interaction, management, and control/compulsion. However, this conclusion may only hold true when many basic requirements for renewal and evidence-based practice are lacking. Such requirements must be evaluated in strategic surveys and analysis prior to planning for implementation efforts.

Another suggestion that emerges from this case history is that implementation plans require evaluations not only of present obstacles and resources, but also expected setbacks, quality decay, and sustainability challenges beyond the initial implementation project. Implementation strategies must consider all these aspects to live up to the real challenges of implementation and reduce its expectable risks (Panzano & Roth, 2006).

Future evidence-based practice requirements and renewals should be built into the education system and practitioner, supervisor, and manager role expectations, as well as integrated into our organizational cultures. This integration would simplify implementation and allow renewals to focus on replacing or improving core elements or support elements (Embry, 2004) rather than reinventing entire service organizations.

Acknowledgments

Practitioners, supervisors, and purveyors in the described case history contributed to this paper by providing access to written sources, offering information to reconstruct the case history, and sharing their views to inform the interpretations and analyses suggested throughout the paper. Conflict of interest declaration: The author participated in some of the activities described, in different positions, during the case history.

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https://econtent.hogrefe.com/doi/pdf/10.1027/2151-2604/a000166 - Tuesday, May 07, 2024 12:05:40 PM - IP Address:3.19.56.45

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