An Integration and Synthesis of Implementation Frameworks
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Implementation science has developed to support the use of innovations in individual fields within and outside of human services. As the evidence-based program movement gained momentum and the quality chasm widened since the 1990s, implementation science has been recognized as a missing link in the science to service chain. As a result, knowledge about evidence-based implementation has grown. The depth and breadth of expanded knowledge has been expressed in unique implementation frameworks developed in given fields within human services and in other fields.

A parsimonious assumption is that implementation is universal. If this assumption is true, then it also is true that each unique framework emphasizes some aspects of the universal. Identifying and combining fragments of the whole contained within unique frameworks can establish an integrated implementation framework to serve the interests of all fields.

An integrated implementation framework can inform theory development and help to rapidly advance the science of implementation in the coming decades. There is broad agreement that implementation science must improve if the impact of research evidence on citizens and society is to improve (Kessler & Glasgow, 2011; Perl, 2011; Vernez, Karam, Mariano, & DeMartini, 2006). Logically, scientists study what is (can be, should be) done in practice. If ineffective implementation methods are used in practice, then implementation researchers are limited to learning about what does not work, and social impact will be modest (Lipsey, 2009; Rossi & Wright, 1984). Using this logic, implementation science will improve when implementation practice improves. Improved implementation methods with broad applicability can lead to improved implementation science that leads to improved social impact.

Given the complexities inherent in multi-variable, multi-layer, multi-year implementation efforts (Hupe, 2014; Plsek, 2001), improved implementation methods have been slow to be identified and studied. With the expansion in knowledge, implementation frameworks can point to potent variables and offer guidance for effective supports for the use of innovations in the complex world of human

services. Implementation frameworks can initiate a *virtuous circle* of improvements in practice, science, and outcomes for children, youth, families, and other individuals that feeds itself for decades to come (Arrow, 1996; Fox & Gershman, 2000; Putnam, 1993).

Frameworks

Frameworks provide a shorthand way to summarize what is known and highlight key variables and their relationships to one another and to intended outcomes. Carpiano and Daley (2006) postulate that frameworks are essential for theory development. The implementation researchers involved in the Improved Clinical Effectiveness through Behavioural Research Group (ICEBeRG, 2006) note the lack of and need for theory in implementation science. They call for a "generalisable framework within which to represent the dimensions that implementation studies address. In doing so, it informs the development and delivery of interventions, guides their evaluation, and allows exploration of potential causal mechanisms" (2006). A "generalisable framework" is the intended product of the synthesis reported in this article and can contribute to improving the impact of innovations supported by research evidence.

Given the interest in realizing the promise of the evidence-based movement, the depth and breadth of knowledge about implementation have expanded. Reviews of the literature regarding diffusion, dissemination (Brownson, Colditz, & Proctor, 2012; Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004), and implementation (Fixsen et al., 2005) have summarized what is known. Researchers and implementation experts now have access to more detailed and nuanced information. The available information has been organized in frameworks to further the work of implementation science, practice, and policy. In the past decade, implementation science has seen the development of a number of frameworks designed to identify key variables that account for implementation outcomes.

The number of frameworks presents a challenge for implementation researchers and potential users of innovations supported by research evidence. Frameworks developed in individual sectors add confusion to a field that has lacked coherence and definition. In their reviews of the literature, Brownson, Colditz, & Proctor (2012; Greenhalgh et al. (2004), and Fixsen et al. (2005) pointed out the difficulties encountered in the review process. Researchers in different fields with different traditions and interests use different language to describe a common concept or use common language to describe different concepts. The lack of agreed upon language for concepts and the absence of commonly used measures of implementation variables hinder reviews and prevent quantitative meta-analyses. A similar problem now can be seen in frameworks tailored to particular fields. Winter (2006) states, "The implementation subdiscipline has been characterized by many different approaches representing different research strategies, evaluation standards, methodologies, concepts, and focal areas for research…. The highly fragmented character of implementation research is not very conducive to theory accumulation" (p 163).

As implementation science becomes a self-conscious discipline, there is a need for theory that organizes what is known and guides future research in a productive way. While a grand theory may be out of reach, the ICEBeRG (2006) group of international scholars described the need for mid-range theories of implementation that can be tested in practice. Thus, while the number of frameworks may add to confusion, they also present a variety of conceptions of a common phenomenon – implementation. General principles may

be contained in the specifics of each framework and create opportunities for development of implementation theory that makes risky predictions, prohibits certain outcomes, and is testable and refutable (Popper, 1963).

Given the advances in knowledge, the field is ready to take the next steps toward integration and synthesis. Establishing an integrated implementation framework can guide the next generation of practice, research, and theory to realize the promise of the evidence-based movement and produce socially significant benefits.

Definitions

The following definitions are based on those offered by Fixsen, Blase, Metz, and Van Dyke (2015).

Evidence-based Movement

Evidence-based research "is a research movement in the medical sciences based upon the application of the scientific method. It seeks the conscientious, explicit and judicious identification, evaluation and use of the best evidence currently available" (Chiappelli, Prolo, Rosenblum, Edgerton, & Cajulis, 2006). According to the U.S. Government Accounting Office (2009), systematic research methods include randomized group designs and "quasi-experimental comparison group studies, statistical analyses of observational data, and – in some circumstances – in-depth case studies. The credibility of their estimates of program effects relies on how well the studies' designs rule out competing causal explanations" (quoted from the Abstract).

The purpose is to use research evidence to produce benefits to children, families, individuals, communities, and society.

Implementation

"Implementation is defined as a specified set of activities designed to put into practice an activity or program of known dimensions. According to this definition, implementation processes are purposeful and are described in sufficient detail such that independent observers can detect the presence and strength of the 'specific set of activities' related to implementation. In addition, the activity or program being implemented is described in sufficient detail so that independent observers can detect its presence and strength. When thinking about implementation the observer must be aware of two sets of activities (intervention-level activity and implementation-level activity) and two sets of outcomes (intervention outcomes and implementation outcomes)" (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005, p. 5).

Implementation is universal and applies to any attempt to use innovations in practice. The implementation activities designed to put into practice an activity or program may be haphazard and unintentional, or they can be purposeful and specified well enough to produce intended outcomes reliably and consistently.

Human Services

The phrase human services denotes the full spectrum of services where one human being (e.g. a therapist; teacher; community organizer) is interacting with another human being (e.g. a patient; student; neighborhood resident) in a way that is intended to be helpful. Human service domains include child development, child welfare, community development, corrections, education, health, global health, mental health, public health, social services, substance abuse treatment, youth development, and others.

Innovation

An innovation is anything new to an individual, organization, or human service system (Rogers, 1995). The innovation may be a therapeutic intervention, instruction method, evaluation method, management practice, clinical guideline, policy directive, improvement initiative, or other activity or program. An innovation may or may not have research evidence to support it.

Interaction-based innovations are embedded in human services and inherently are different from atom-based innovations (Fixsen, Blase, Metz, & Naoom, 2014; Jensen, Weersing, Hoagwood, & Goldman, 2005). In atom-based innovations, the science is built into the serum or seed and the composition remains the same no matter who delivers it. Interaction-based innovations rely completely on who delivers them.

Design of the study

Qualitative content analysis provides a methodology for studying diverse perspectives regarding a common theme. For this study, diverse perspectives regarding the common theme of implementation science are presented through source documents related to 32 frameworks. Content analysis allows source documents to be studied systematically to identify core meanings and consistencies (Morgan, 1993; Patton, 2002).

Sample

The sample of frameworks for analysis is derived from two comprehensive reviews of the implementation literature that provide an inventory of existing frameworks. Meyers, Durlak, and Wandersman (2012) identified 25 implementation frameworks. Tabak, Khoong, Chambers, and Brownson (2012) identified 61 models for dissemination and implementation and classified them as dissemination frameworks (n=27), dissemination and implementation frameworks (n=22), or implementation frameworks (n=12). To be included in the sample for the current study a framework must have the aim of explaining how to use research-based innovations to produce an intended outcome and be cited in one of the two reviews as an implementation framework. Excluded were frameworks aimed at explaining the spread of information or general influences on decision making. The 25 implementation frameworks in the Meyers, Durlak, and Wandersman (2012) review and the 12 implementation frameworks in the Tabak et al. (2012) review met the inclusion criteria. Five frameworks appeared on both lists resulting in 32 different frameworks included in the sample for this study. The 32 frameworks and 45 source documents in the sample are listed in Table 1. The literature review that inventoried the framework is listed in the "Review" column of Table 1. As noted in the table, the frameworks are drawn from work in a number of fields, such as

mental health, health care, business, substance abuse, education, and violence, drug use, and injury prevention. Source documents are noted in Table 1 and Table 2 indicates whether documents were available in a form suitable for further qualitative analysis. Source documents were not available or not suitable for data entry and further analysis for seven (7) frameworks.

The modest overlap among the frameworks (5 of 37) in two major reviews published in the same year provides a glimpse of the conundrum facing implementation researchers and potential users of innovations supported by research evidence. Nevertheless, the frameworks represent 32 views of implementation. In this regard, the 32 frameworks offer information about a range of perspectives from a variety of human service fields and identify components considered important to using research evidence in human services.

The dates of publication of the 45 source documents for the 32 frameworks are an indication of the recent expansion of interest in implementation science and practice. Only 4 source documents cite frameworks developed before the current millennium and 22 were published after 2005. Thus, the time is right to analyze current frameworks and provide guidance for the next generation of research, practice, and theory development.

Table 1. The 32 distinct implementation frameworks identified from Tabak et al. (2012) and Meyers et al. (2012) are listed alphabetically.

Review	Framework and Source Documents	Primary Focus
Tabak	**4E's Process Theory** Pronovost, Berenholtz, and Needham (2008)	Health
Both	**Active Implementation Frameworks** Fixsen et al. (2005) and sisep.fpg.unc.edu/learning-zone/science-of-implementation/implementation-frameworks	Transdisciplinary
Both	**Availability, Responsiveness & Continuity (ARC): An Organizational & Community Intervention Model** Glisson and Schoenwald (2005) and Glisson et al. (2010)	Delinquency and mental health
Meyers	**Blueprints - Evidence-based violence and drug prevention programs** Hawkins, Catalano, and Arthur (2002); Mihalic et al. (2004)	Corrections and substance abuse
Meyers	**Community-based prevention services** Sandler et al. (2005)	Community development
Meyers	**Community-based programs for violence prevention and substance abuse prevention** Stith et al. (2006)	Community development and substance abuse

Review	Framework and Source Documents	Primary Focus
Tabak	**Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors** Aarons, Hurlburt, and Horwitz (2011)	Human services and child welfare
Both	**Consolidated Framework for Implementation Research (CFIR)** Damschroder et al. (2009)	Health
Meyers	**Diffusion, dissemination, and sustainability of innovations in health care** Greenhalgh et al. (2004)	Transdisciplinary
Meyers	**Framework to implement strategies in organizations (management)** Okumus (2003)	Business
Meyers	**Getting To Outcomes (GTO): Community-based substance abuse prevention planning** Chinman et al. (2008) and Chinman, Imm, and Wandersman (2004)	Substance Abuse
Meyers	**Health promotion and disease prevention** Guldbrandsson (2008)	Health
Both	**Implementation Effectiveness Model** Klein and Sorra (1996) and Klein, Conn, and Sorra (2001)	Business
Meyers	**Interactive Systems Framework - Injury and violence prevention** Wandersman et al. (2008); Wandersman and Florin (2003)	Corrections, delinquency, and injury prevention
Tabak	**Normalization Process Theory** May and Finch (2009) and Murray et al. (2010) and www.normalizationprocess.org.	Transdisciplinary
Tabak	**Organizational Theory of Innovation Implementation** Weiner, Lewis, and Linnan (2009)	Human services
Meyers	**PARIHS Evidence-based healthcare** Rycroft-Malone (2004)	Health
Tabak	**PARIHS - Promoting Action on Research Implementation in Health Services** Kitson, Harvey, and McCormack (1998) and Kitson et al. (2008) and Rycroft-Malone (2004)	Health
Meyers	**Prevention and health promotion programs** Durlak and DuPre (2008)	Health
Meyers	**PRISM Evidence-based health care** Feldstein and Glasgow (2008)	Health
Meyers	**PROSPER Population-based youth development and reduction of youth problem behaviors** (e.g., substance use, violence, and other conduct problems).	Delinquency and education

Review	Framework and Source Documents	Primary Focus
	R. L. Spoth and Greenberg (2005) and R. Spoth, Greenberg, Bierman, and Redmond (2004)	
Meyers	**QUERI Evidence-based health care United States Veterans Administration** Stetler, McQueen, Demakis, and Mittman (2008)	Health
Both	**Replicating Effective Programs Plus Framework** Kilbourne, Neumann, Pincus, Bauer, and Stall (2007)	Health
Meyers	**School-based preventive and mental health promotion interventions** Greenberg, Domitrovich, Graczyk, and Zins (2005)	Education and mental health
Tabak	**Sticky Knowledge** Elwyn, Taubert, and Kowalczuk (2007) and Elwyn et al. (2007) and Szulanski (1996)	Business
Meyers	**CASEL** http://www.cdc.gov/globalaids/support-evidence-based-programming/implementation-science.html	Education
Tabak	**Conceptual Model of Implementation Research** Proctor et al. (2009)	Health
Meyers	**Diffusion of innovations in organizations** Rogers (2003)	Agriculture and communications
Meyers	**School-based innovations** Hall and Hord (2011)	Education
Meyers	**Community-based prevention planning** www.pfsacademy.org	Community development
Meyers	**Technological innovations** Van de Ven, Angle, and Poole (2000)	Business
Meyers	**Comprehensive, individualized, family-driven mental health services** Walker and Koroloff (2007)	Child welfare and mental health

Coding and analysis process

All source documents were entered into the *Atlas.ti* software program and analyzed using the coding function in the software. For example, in *Atlas.ti* text (a "quotation") in a source document can be highlighted and coded with one or more codes. Qualitative content analysis (Agar, 1980) is based on an initial set of codes, themes, and categories based on a review and synthesis of the implementation evaluation literature (Fixsen et al., 2005). The prefigured categories, themes, and codes used to code the primary

source documents narrows the scope of data analysis (Creswell, 2007). Coding is recursive and allows a researcher to go back through the data to alter codes to better suit the content (Miles & Huberman, 1994).

Coding is based on the Active Implementation Frameworks (Blanchard et al., 2017; Fixsen, Blase, Naoom, & Wallace, 2009; Fixsen, Schultes, & Blase, 2016; Metz & Bartley, 2012; Ogden et al., 2012). The Active Implementation Frameworks (AIF) operationalize practices related to effective innovations, effective implementation, and enabling contexts (Fixsen, Blase, et al., 2015). Active Implementation is comprised of six frameworks that function in a highly integrated manner:

1.   Usable innovations: operational descriptions of innovations that include a practical assessment of fidelity that is highly correlated with intended outcomes

2.   Implementation teams: groups that are highly skilled in the use of the Active Implementation Frameworks and affecting organization and system change

3.   Implementation drivers: methods to assure the development of innovation-related competencies, organization changes, and engaged leadership that support high fidelity use of innovations in practice

4.   Implementation stages: exploration (assessing and creating readiness), installation (amassing human and financial resources), and initial implementation activities and outcomes (support the use of the innovation in practice) that eventually lead to full implementation within organizations and systems (at least 50% of the practitioners in an organization meet fidelity standards for using the innovation in practice)

5.   Improvement cycles: plan-do-study-act cycles and usability testing for purposeful problem solving and continual improvement in methods and outcomes

6.   Systemic change: practice-policy communication protocols to modify, align, integrate, and leverage existing structures, roles, and functions so that the implementation supports for the innovation maximize intended outcomes at scale

Utilizing prefigured themes or categories is contrary to some qualitative research that leaves all codes open to reflect the content of the data. In this case, the prefigured categories are based on prior work that employed open coding of the research literature. The use of *a priori* coding categories and themes represents a top-down process known as deductive category formulation and application (Mayring, 2000) or typological analysis (Hatch, 2002). In addition to the *a priori* codes, free coding was used to identify aspects of frameworks that did not fit with the AIF codes.

The power of the *Atlas.ti* software allows all of the text associated with a single code to be accessed readily. This function pulls the text out of the context of a document and allows a researcher to focus on the accumulated text associated with each code. This makes it practicable to check for consistency and to extract information within and across multiple codes. By focusing on the text out of context, commonalities across documents can be discerned and oddities can be identified. A total of 740 quotations were coded in the

source documents resulting in over 600 pages of text. For analysis, specific codes (e.g. training, coaching, fidelity, use of data, leadership) were summarized in "coding families" related to the six Active Implementation Frameworks.

Results

The following table provides a summary of the number of quotations coded in 31 source documents related to 24 implementation frameworks. The quotations are organized into categories (code families) related to the Active Implementation Frameworks.

Table 2. The number of coded "quotations" in each framework. If multiple source documents were cited for a framework, each document was coded and the codes were summed to produce the number in the table.

Reviewed Frameworks	Active Implementation Frameworks						TOTALS
	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	
4E's Process Theory	3	0	5	2	2	3	15
Availability, Responsiveness, Continuity (ARC)	1	7	3	5	6	2	24
Blueprints Evidence-based violence and drug prevention programs	2	2	5	6	5	0	20
Community-based prevention services	8	4	6	7	6	14	45
Community-based programs for violence prevention and substance abuse prevention	6	9	18	13	3	7	56
Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors	3	17	15	21	4	2	62
Consolidated Framework for Implementation Research (CFIR)	4	13	10	7	5	9	48
Diffusion, dissemination, and sustainability of innovations in health care	7	14	12	9	5	4	51
Framework to implement strategies in organizations (management)	0	13	11	8	3	6	41
GTO Community-based substance abuse prevention planning	5	5	9	6	4	5	34

Reviewed Frameworks	Active Implementation Frameworks						TOTALS
	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	
Health promotion and disease prevention	0	0	0	1	1	0	2
Implementation Effectiveness Model	7	16	16	13	2	5	59
ISF Injury and violence prevention	2	10	9	3	8	3	35
Normalization Process Theory	7	2	2	2	1	1	15
Organizational Theory of Innovation Implementation	3	14	8	12	0	2	39
PARIHS Evidence-based healthcare	3	8	5	1	6	1	24
Prevention and health promotion programs	3	8	14	4	2	3	34
PRISM Evidence-based health care	4	6	7	6	3	2	28
Promoting Action on Research Implementation in Health Services-PARIHS	0	2	0	0	2	0	4
PROSPER Population-based youth dev	1	8	5	7	5	4	30
QUERI Evidence-based health care	0	6	4	1	1	0	12
Replicating Effective Programs Plus Framework	1	0	2	4	1	2	10
School-based preventive and mental health promotion interventions	1	2	6	5	4	2	20
Sticky Knowledge	3	4	6	9	6	4	32
CASEL	Source documents related to these 7 frameworks were not examined. Some source documents were not in a format that could be entered readily into *Atlas.ti* qualitative analysis software (books or internet content, e.g., Rogers, 2003; Hall & Hord, 2011). Other source documents were summaries of the literature or descriptions of studies and not intended to be frameworks (e.g. Proctor et al., 2009; Walker & Koroloff, 2007).						
School-based innovations							
Community-based prevention planning							
Conceptual Model of Implementation Research							
Diffusion of innovations in organizations							
Technological innovations							

Reviewed Frameworks	Active Implementation Frameworks						TOTALS
	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	
Comprehensive, individualized, family-driven mental health services							
TOTALS:	74	170	178	152	85	81	740

Fit and readiness

As noted in Table 2, each framework emphasizes different aspects of the AIF and there is substantial overlap among the frameworks. However, two categories of codes emerged that were emphasized heavily in the other frameworks and not in the Active Implementation Frameworks. The code for "Recipients" included the practitioners who are being asked to use an innovation and the patients/intended beneficiaries of an innovation. Their psychological state and willingness to participate are noted by other frameworks in a prominent way. By contrast, the AIF include the willingness of recipients to participate fully as part of the Selection Driver and the Usable Innovation inclusion/exclusion criteria.

The code for "Fit" was given great emphasis in nearly all of the other frameworks. The psychological fit between practitioners and innovations and the cultural fit between organizations and innovations were coded multiple times for each framework. In contrast, the AIF includes fit in the Exploration Stage (organization) or Selection Driver (practitioner) where fit is discussed, assessed, and created as needed. The AIF also include fit in the Organization Drivers and Leadership Drivers during the Initial Implementation Stage where alignment is developed between practitioners, organization practices, and the use of innovations with fidelity. For Recipients and Fit, the AIF assume readiness and fit must be created and assured prior to beginning the work of attempting to use an innovation. Other frameworks are not clear about how to create the complex dimensions of Recipient readiness or Fit if it is lacking.

Health frameworks

There is a perception that implementation science is dominated by health and that applications in health are different. The following summary summarizes the codes for implementation frameworks identified with health in Table 1. Of the codable frameworks listed in Table 2, Table 3 provides the data for the 8 health-oriented frameworks (n=173 coded "quotations") contrasted with the data regarding the 16 not-specifically-health frameworks (n=567 coded "quotations").

Table 3. Contrasting results for health frameworks and other frameworks. The % is the number of coded "quotations" divided by the total for each group.

	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	TOTALS
Health Frameworks (n=8)	10.4%	23.7%	27.2%	15.0%	12.1%	11.6%	100.0%
Other Frameworks (n=16)	9.9%	22.8%	23.1%	22.2%	11.3%	10.8%	100.0%

The data for the two groups of frameworks are very similar, with slightly greater emphasis on the implementation drivers in health and a greater emphasis on implementation stages in the other frameworks.

More or fewer coded "quotations"

Another question concerns how much each framework contributes to the conclusion that the Active Implementation Frameworks provide a good summary of all the frameworks. In Table 4, the 12 frameworks with more coded information (n = 536 codes) are contrasted with the 12 frameworks with fewer codes (n=204 codes).

Table 4. Contrasting results for the frameworks with the most and fewer coded "quotations." The % is the number of coded "quotations" divided by the total for each group.

	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	TOTALS
Frameworks with more codes (n=12)	9.5%	23.7%	25.0%	20.9%	9.0%	11.9%	100.0%
Frameworks with fewer codes (n=12)	11.3%	21.1%	21.6%	19.6%	18.1%	8.3%	100.0%

Table 4 shows the data for the two groups of frameworks are very similar. The frameworks with more coded information emphasized improvement cycles a bit more and the frameworks with fewer codes emphasized implementation teams more.

The frameworks with the most codes that align with the Active Implementation Frameworks are listed in Table 5.

Table 5. Coded "quotations" for frameworks with content that is most aligned with the Active Implementation Frameworks.

Reviewed Frameworks	Usable Innovation	Systemic Change	Impl. Drivers	Impl. Stages	Impl Team	Improvement Cycles	TOTALS
Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors Aarons et al. (2011)	3	17	15	21	4	2	62
Implementation Effectiveness Model Klein and Sorra (1996) and Klein et al. (2001)	7	16	16	13	2	5	59
Community-based programs for violence prevention and substance abuse prevention Stith et al. (2006)	6	9	18	13	3	7	56
Diffusion, dissemination, and sustainability of innovations in health care Greenhalgh et al. (2004)	7	14	12	9	5	4	51
Consolidated Framework for Implementation Research (CFIR) Damschroder et al. (2009)	4	13	10	7	5	9	48

In these closely aligned frameworks, the emphasis is on implementation drivers and stages and systemic change.

Conclusion

For current purposes, it is apparent that the various frameworks are very similar and fit equally well into the key components of the Active Implementation Frameworks. As noted in the totals at the bottom of Table 2, the frameworks overall included more coded information related to Implementation Drivers, Systemic Change, and Implementation Stages. Implementation Teams, Improvement

Cycles, and Effective Innovations also were well represented although there were fewer coded quotations related to these three components.

The summary presented in Table 2 is important for advancing implementation science, practice, and theory. The Active Implementation Frameworks are based on a thorough review of the implementation evaluation literature (Fixsen et al., 2005), analysis of best practices as described by expert purveyor and user groups (Blase, Fixsen, Naoom, & Wallace, 2005; Blase, Naoom, Wallace, & Fixsen, 2015), and evaluations in organization and system change efforts (Fixsen, Blase, Metz, & Van Dyke, 2013; Metz, Naoom, Halle, & Bartley, 2015; Sullivan, Blevins, & Kauth, 2008). The research base and best available practice evidence base provide a comprehensive foundation for the Active Implementation Frameworks. As a comprehensive evidence-based and practice-based framework, the Active Implementation Frameworks offer a comfortable fit with the 24 frameworks subject to review and provide a place to begin to integrate core elements of implementation across disciplines and fields of study in health and other human services.

With an integrated approach to implementation, implementation theory can be advanced. Hypotheses derived from the Active Implementation Frameworks (Fixsen et al., 2005, pp. 95-99) can be tested in prospective studies of implementation independent variables that are generated on purpose and relevant implementation outcomes can be assessed. Established measures (Fixsen, Ward, Duda, Horner, & Blase, 2015; Ogden et al., 2012; St. Martin, Ward, Harms, Russell, & Fixsen, 2015; Ward et al., 2015) are available to directly assess the presence and strength of the Active Implementation Frameworks as independent and dependent variables. Focused data from experiments can be used to revise, refine, and extend the Active Implementation Frameworks so they are more accurate and complete. A testable theory will be required to advance the evidence base for implementation practice, science, and policy so that greater benefits can be produced for whole populations (Fixsen, Blase, & Fixsen, 2017).

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